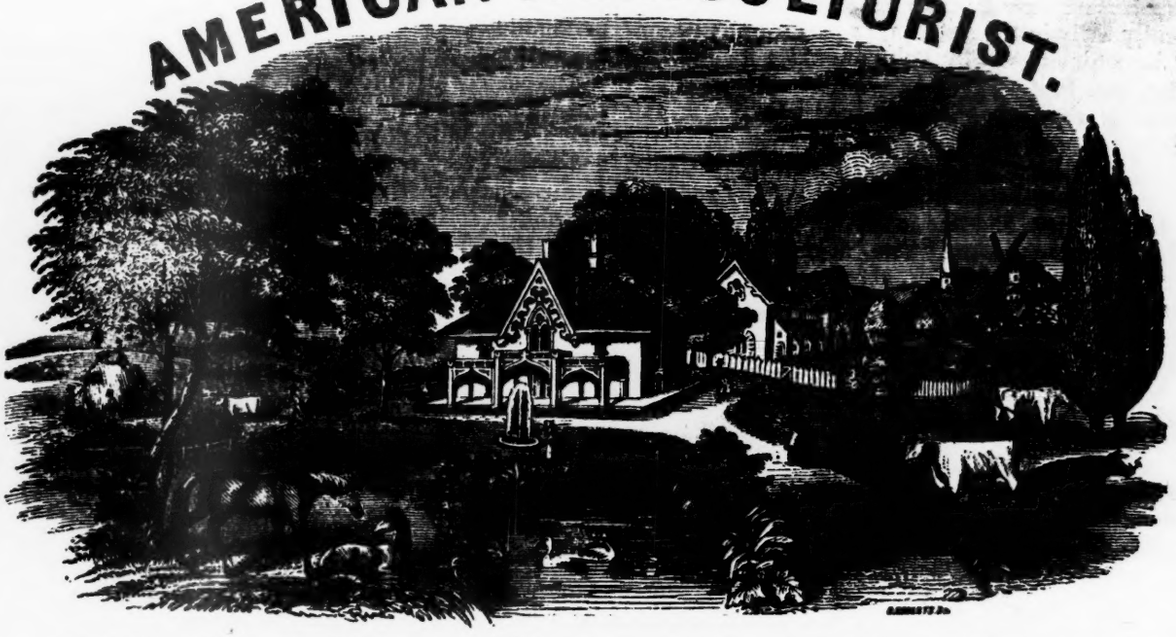
# AMERICAN AGRICULTURIST.

*Agriculture is the most healthful, the most useful, and the most noble employment of man.*—WASHINGTON.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A. B. ALLEN, Editor. SAXTON & MILES, Publishers, 205 Broadway.


## VALUE OF THE GRASSES.

THE product of our grass land is not only far beyond that of any other crop in the United States, but is probably greater than all other crops combined, as they are taken from the field. This is not true with certain parts of the Union, as in portions of the South, where cotton, rice, sugar, or other leading articles are cultivated; nor with such as are in the neighborhood of large markets, where fruits and vegetables are in steady demand at high prices. But throughout the States generally, we do not doubt that the aggregate of the production of grass is far beyond that of all other *raw* products combined: for it must be remembered that grain and rice, after harvesting, must be threshed and cleaned at an expense of several cents per bushel; cotton must be carefully picked and cleaned, and then baled; sugar and tobacco must be manufactured before they are ready for market; all of which expenses should first be deducted before placing them on a par with grass, which is always marketable in the field, either by the animals which consume it, or as hay. If we consider farther, that nearly every one of the other products is raised by long-continued, expensive, laborious efforts, both of man and beast, we largely enhance the comparative value of the grasses, as they are thus secured in all their value and importance at a much cheaper rate than other productions. Another and highly important advantage they possess over other crops is, they but slightly impoverish the soil in any instance, while, in many, they tend to its fertilisation; but all other crops exhaust it to a greater or less degree. If these propositions be true, it behooves the farmer to look well after his grass lands. If properly prepared and managed, they are a mine of wealth to him; while, with the generality of farmers, if they be neglected, wo betide his results, for he will secure nothing for his purse, if he even succeeds in providing himself and family with the necessaries of life.

With too many of the farmers, grass lands are either totally neglected, or they receive just enough of attention to rescue them from absolute abandonment. Some farmers never sow an ounce of grass seed on their land; but after first clearing off the original growth of wood, or taking off a crop of grain, they heedlessly abandon it to the growth of such herbage as may spring up from the chance seed of former years' accumulation in the soil; and as this is pretty equally made up of the seeds of grass and weeds, the latter usually usurp their full share of the soil, till such time as the former has the power of assuming that predominance which a kind Providence has given to the useful over the useless or prejudicial products of nature.

Grass-lands, whether intended for meadow or pasture, ought to be prepared with the same caution as fields of grain or vegetables. They should be finely, evenly, and smoothly plowed and harrowed; they should be in high condition as to fertility; all the furrows should be carefully smoothed down and levelled if leechy land, or as carefully cleaned out and kept open for thorough surface draining, if they consist of stiff clay. The seed should be well chosen for plumpness and weight, and entire freedom from any improper mixture; and, lastly, it should be evenly and *most liberally* sown with one, or as many varieties of grass or clover, as is best suited to the soil, or the object proposed. If, from unforeseen causes, as drought or winter killing, or imperfection of seed, any spots should prove bare or imperfectly seeded, the first proper time should be taken for re-seeding it. Cattle should be carefully excluded till the grass has acquired a fine sod, and, in the spring, and suf-

ficiently early in the autumn, to prevent any poaching, by which unsightly holes are made for standing water, and to the total exclusion of all growth of grass. If the herbage at any time becomes thin or deficient, or mosses or weeds encroach upon the useful growth, guano, ashes, plaster, lime, stable-manure, peat, or muck composts should be added to remedy the first, and the usual appliances resorted to for removing the last. Thus managed and grazed by choice breeds of stock, every way well looked after, the farmers generally will find their most profitable returns from grass lands.

## AGRICULTURAL COLLEGES AND SCHOOLS.

*To Legislators throughout the United States*—or rather to their constituents, as the former are merely their servants—their waiting echo.

The establishment of Agricultural Schools and Colleges by our legislative bodies has been repeatedly urged in these columns, but hitherto, like many other important things, without success. Although hopeless of securing any present aid for these most praiseworthy objects, by our National or State Legislatures, we yet deem it incumbent upon us, as conductors of a public journal, whose sole object is the advancement of the agricultural classes, to reiterate and re-urge this question. If we cannot for the present induce any favorable action from those who are delegated to enact laws, we can bring the subject to the attentive consideration of those who select their representatives for this purpose. We thus hope to enlighten public sentiment on this all-important matter; and if *the people* are once awakened to its importance, they will see to it, that their representatives do not long continue to neglect their interests. If they *will not lead* in a measure of such vital consequence to this, the largest interests of the community, they *can be driven* into it when the people have become aroused.

It is somewhat strange, and entirely unaccountable on any other principle than narrowness of views, discreditable to the age, or the utter subserviency of our leading men to the behests of party, that they cannot take this single step in advance of the practice of past ages, and assume the responsibility of maturing and carrying out a measure fraught with so much benefit to the country at large, as would result from the establishment of one or more institutions, which will bring to the minds of adults as well as youth, the great principles and the most approved practice of Agricultural Science. Should our law-makers vote an amount perfectly adequate to the purchase of a suitable experimental farm and the erection of proper buildings, apparatus, &c., and engage some able men to carry out the objects of the undertaking, can it be doubted that the farmers of the great State of New York would not most fully sustain it? Are they for ever to remain the hewers of wood and drawers of water to every other class in the community, and see thousands annually devoted to the higher branches of education in other professions, and they not be allowed to receive a meagre per centage of this outlay, for the necessary improvement of their own profession and interests? True, they can participate, in common with others, in the higher walks of academical and collegiate education, provided by the munificence of the State; yet they will find there little to fit them for their own peculiar sphere.

The discovery of a new world of agricultural science has burst upon this age; and order and design are found to govern, by the exactest principles and laws, every one of nature's operations. Many of these principles and laws have been detected by the ablest scientific explorers of Europe, such as Davy, Chaptal, Boussingault, Liebig, Johnston, and others. These discoveries, and what are destined to succeed them, will give to agricultural pursuits a precision and advantage, similar to what followed the discovery of the magnet in maritime affairs. The farmer has, from time immemorial, been groping in the dark; he knew only what experience revealed to him; and even from this he often drew false conclusions, from not being able to comprehend all the premises, and the most ordinary operations of nature. With well known, undeviating principles with which to work, the Agriculturist could push boldly into the ocean of experiments, and calculate, with unerring certainty, his latitude and longitude, and the precise distance he was from any given point, instead of slowly coasting along dangerous, dreary coasts, in continual fear of shipwreck. The difference between the practice of a farmer of the last century and of one in the age to come, will not be less than the difference between a voyage from Liverpool to Boston by the Cunard line of steamers, and a coasting voyage from the same point, by the Scottish coast, the Orkneys and Shetland isles, Nova Zembla, the Polar ice, Greenland, and the north-eastern coast of America, in the ancient craft of the Carthaginians or freebooting Danes and Swedes.

Talk of the agricultural intelligence of this age! Why, it is merely this; some few intellectual men of other countries—scarcely any of our own,—have just overstepped that horizon of darkness, which has hitherto hedged in the world, and made a few preliminary discoveries! What a poor amount of agricultural knowledge is this! It is in the spirit of the age, and should be peculiarly that of this country, which boasts of its intelligence, to carry out by every means in its power, so laudable, so intelligent, and withal *so money-making a scheme*,—for "*money*" is the talismanic word we are forced to use. But so little light has hitherto penetrated among our agriculturists, that five-sixths of the most intelligent of them will tell you, that "the new of the moon is the time for this, the first quarter for that, her fulling for another, and her waning for something else." Not even a *Farmer's Almanac* will sell, without a mystic figure installed as the key of nature, surrounded by the Zodiac and its signs, whose converging rays indicate the hidden secrets of nature, and expose the whole cycle of her operations! Astrology, that has been abandoned by the world at large for two hundred years or more, is good enough to reveal the mysteries of the farmer's art, embracing, as it does, almost all the laws of nature! Out upon the *twaddle*, and more unmeaning *gibberish* than nursery maids deal out to nurslings, when they tell the farmers, "their dear constituents,"—"the bone and sinew of the land"—"the most enlightened class of the country,"—"the expectancy and rose of the fair State," and

other holiday and juggling terms, with which they are smothered; adding that "*they* do not require any assistance from art, they have only to plow and delve, and cast in their seed, and nature will do the rest—they need but pay their taxes for the support of the State, and others will take care that government and the professions are well looked after."

Were our own views carried out, we would appropriate at once, half a million of dollars for the founding of an Agricultural College and experimental farm, the interest of which should for ever be devoted to the employment of the ablest professors the world affords, whose whole genius and attainments should be devoted to discoveries in this art, and in teaching them to our most intelligent youth. We would invite the Liebigs, and Boussingaults, and Johnstons, and Bakewells, to occupy chairs in the institution, *at salaries which would command their acceptance;* and as soon as others could be appropriately filled by American genius, who should be pressed into service to the full extent of the demand. Minor establishments should receive encouragement and support, and every pecuniary aid which could facilitate the discovery and dissemination of agricultural science and art, should be freely and liberally granted. We should then see the beginning of the end of the shameful neglect of the agricultural class; we should be able to console ourselves with the reflection, that we had at least made whatever effort was in our power, to accomplish the greatest good to the greatest number.

What say you, farmers, to this proposition? Shall anything be done or not? If anything is to be accomplished, you will have to make the first move. You must *command* your delegates to give you from their loaded coffers, some small part of the means *you* have so liberally provided for them, that you may be able, from its judicious expenditure, to supply still more. You have only to set about this in earnest, and the object is already accomplished.

The above was written for our March number, but unfortunately crowded out. By reference to the proceedings of the American Agricultural Association, page 109, it will be seen that one of our citizens has generously offered the free use of his farm for five years, for the benefit of an Agricultural School. This farm is in the finest possible order, and one of the best in this vicinity. Its buildings also are very complete, and nearly new. We hope others will be stimulated to follow this munificent example. If public bodies will not move, let private bodies do so, and the former will soon emulate their example. It is painful to think of the wealth which is annually lavished on vanity and folly in this country, which might, if the owners would but will it, be devoted to the glorious cause of the advancement of the science and practice of agriculture.

VALUE OF ANTHRACITE COAL ASHES.—In the February No. of the Agriculturist, page 55, one of our correspondents gave an excellent article on the value of anthracite ashes for corn. Since this, we understand they were applied on the grass lands in New Jersey, last spring, at the rate of 50 bushels per acre, and notwithstanding the unprecedented drouth, they were the means of doubling the crop of grass. As there are more or less hard cinders in these ashes, after spreading them on grass lands, it would be well to pass a roller over the meadow in order to sink the cinders in the ground, out of the way of the edge of the scythe. Anthracite ashes can be had in the city for the mere cost of gathering, and in some instances the corporation carts will deliver them on the dock, gratis. We hope to see them no longer wasted in the streets of New York.

## INDIAN CORN FOR SOILING AND FODDER.

WE doubt whether the value of Indian corn is more than half known yet among the generality of farmers; and if the unparallaled drought throughout the country last summer should have a tendency to teach it to them, the terrible lesson may be looked upon as a mercy rather than a scourge, from a beneficent Providence. During the past eight months, thousands of animals have perished or been sacrificed for want of grass or fodder to sustain them, all of which might have been saved and kept in good condition, had each farmer sown a few acres of corn for soiling and fodder. We saw last summer, on a light sandy soil, a crop of corn growing, which turned out six tons of excellent dry fodder per acre. It was sown on the first day of July, in drills three feet apart. The land was plowed deep, and highly manured. This crop was the means of saving a superior herd of cows from starvation. Henceforth, however promising the grass and hay crop may be, let no farmer depend entirely upon it, but let him sow a few acres of corn for summer soiling, or to be cured for winter's use. He will then be tolerably independent of a capricious season. If the land be rich and properly prepared for corn, it will be sure to come up and grow, however dry it may be, provided the seed be prepared by steeping it in guano or saltpetre water, or some other cheap solution. When corn is tolerably advanced in its growth, it completely shades the ground, and the drought will have little effect upon it. A larger crop may usually be grown in drills than when sown broad-cast; and if these drills be two or two and a half feet apart, we believe it will be found better than nearer, especially in a very dry season, as the cultivator can be often run between the rows, stirring the ground effectually, and neutralizing, in a measure, the effects of dry weather. We recommend sowing at least one acre of corn for fodder, for every five head of cattle kept on the farm. If there be an overplus of hay it is very easily disposed of.

FISH.—These are used in large quantities as manure. They are ordinarily applied directly to the land by being plowed in; or corn and other crops are manured in the hill with them. This is a great waste, however, in their application, and a shocking nuisance to the country around; for the moment decomposition begins, the air is poisoned with their noxious smell. To prevent this, they should be mixed with peat, in layers of 3 inches of fish to 9 inches of the latter. After lying three months or so, toss over the compost, and it is ready for use. Fish may be composted with muck or soil of any description, in the same way as peat; but in this case sufficient charcoal dust or plaster of Paris must be added to absorb the unpleasant smell.

## THE CUTTER, THE COULTER, AND THE LOCK-COULTER.

These terms are so often used as synonymous, we insert three cuts of plows for the purpose of explaining them, and showing the difference between each.

*The Cutter*, in fig. 30, is of wrought iron, edged with steel of the best quality. It passes through a mortice in the centre of the beam, where it is fastened by an iron clamp, and reaches nearly down to the point of the share. It can be raised or lowered at pleasure, or be taken out of the beam entirely. It is also clasped on the side of the beam when required.

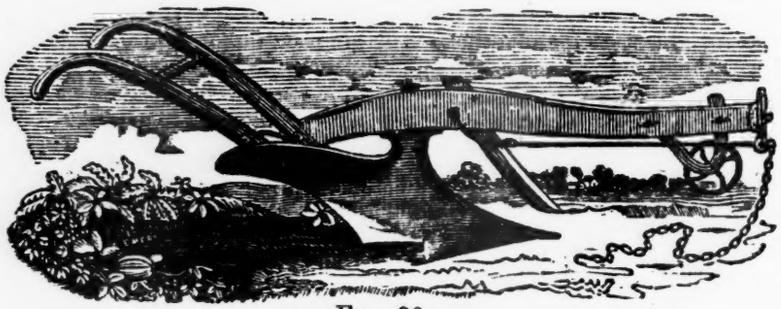

Fig 30

*The Coulter*, in fig. 31, is cast on to the point of the plow-share, and thus forms a part of it.

*The Lock-Coulter*, in fig 32, is also made of wrought iron, steel-edged in Eagle No. 2, and sizes larger having them ; in Eagle No. 1 it is made of cast iron. It passes through the beam, and is made fast with a nut and screw, or key, and locks through the point and mould-board where they join. This gives it strength, and makes the plow suitable to be used among rocks, and especially the roots of newly-cleared land ; for the lock-coulter cannot be turned on one side or forced out of its place, but will instantly sever roots of an inch or two diameter, and thus enable the plow to turn the furrow smoothly and with great ease. The lock-coulter can be taken out at pleasure

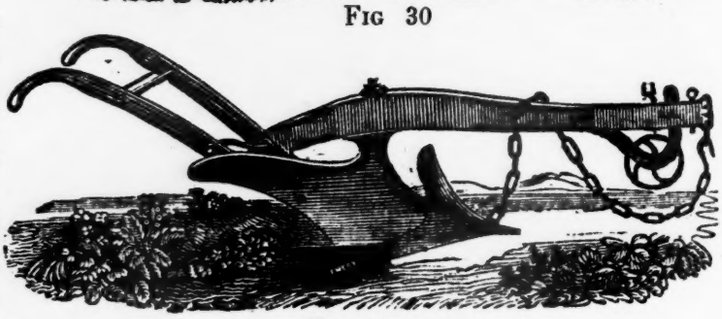

Fig. 31.

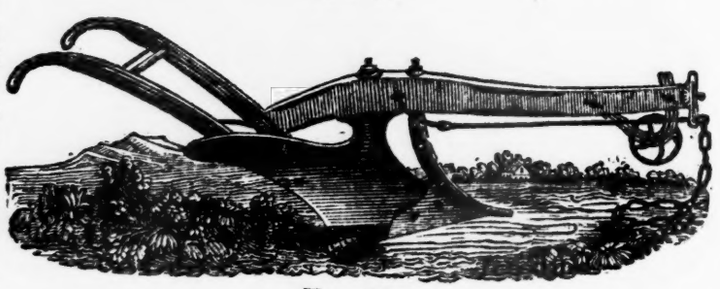

Fig. 32.

In fig. 32, is affixed, when required, a sharp steel-edged share or point, cutting very wide, and a reversed or drag *cutter*, for the purpose of plowing and completely turning over the surface of wet meadows when reclaimed by ditching. A crane clevis is attached to the end of the beam to pull by, which enables the off horse to keep clear of the miry open furrow, so very fatiguing to him, and tread on the *unbroken* ground as well as the near horse ; thus making it comparatively easy work for the team, and obviating the great objection to breaking up wet meadows or swampy ground. The newly invented dial-clevis and draught-rod, as seen in figs. 30 and 31, will also enable the off horse to tread on solid ground in plowing wet meadows, nearly as well as the crane-clevis, and run close alongside of a fence or ditch. This would be an admirable plow for the rice lands on the Mississippi, and for the prairie lands of the West. When the meadow fixtures are removed, and the original point or share replaced, the plow is adapted to the rugged upland soils, thus answering the double purpose of an upland and meadow plow.

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Descriptive Catalogue of Horticultural and Agricultural Implements and Tools, and Field and Garden Seeds ; with brief directions for Planting, Sowing, and Culture ; and rules for the application of Guano, Lime, Plaster, Bone-dust, and other manures. Also a choice list of Fruit Trees, with directions for planting out and culture. Also a description of the best breeds of domestic animals, and the best time and manner of transporting them South. By A. B. Allen. New York Agricultural Warehouse, 187 Water Street. This is an octavo pamphlet of 80 pages, containing upwards of one hundred explanatory Illustrations, which we have published for the purpose of answering questions daily addressed us by our customers. It can be had *gratis* on application, post-paid. The title page of this work sufficiently explains its nature, and renders any further notice of it unnecessary on our part.

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Mustard as a Garden and Field Crop.—The white and broad leaf kinds are excellent for salad or greens. They should be sown very early in the spring, in a rich warm soil, in shallow drills, ten inches apart, and kept clean from weeds. After the crop is off, the ground may be planted with cucumbers for pickling, or used for a succession of salad or radishes. Mustard is now cultivated extensively as a field crop, by sowing it broadcast. Mow it when ripe, and cure it like grain or hay, and thresh out the seed in a grain thresher. It yields from ten to fifteen bushels per acre, worth $3 to $4 per bushel. It is a great exhauster of the

land, and requires a rich soil. It is sometimes plowed in green, to enrich the land.

## AMERICAN AGRICULTURAL ASSOCIATION.

THE monthly meeting was held on the 4th of last month at their rooms in the University, the Hon. Luther Bradish, President, in the chair.

The committee appointed at the February meeting, to procure a proper place for the meeting of the Association, reported that they had made a contract with the Historical Society, for the use of their rooms in the University, at an annual rent of $150, subject to the approval of the Association. The report was adopted. This contract is for the year ending March, 1847, but may be terminated at any time at the pleasure of the Association.

Mr. Edward Clark read a paper on the subjects of the Mulberry and the Silk Culture of the United States. His paper is too long for publication, and does not admit of analysis. He was followed by Mr. Van Epps, who gave some information as to the silk culture of the country. He is the manager of a large silk manufacture now being established at Washington, D.C., by Mr. Van Ness. He gave a condensed statement of the statistics contained in the reports of the Commissioner of Patents. It appears that the mulberry is cultivated and cocoons produced in every State in the Union. The mass of cocoons, however, is produced in the following States.

| | 1840. | 1844. |
|---|---|---|
| Maine | 211 lbs. | 815 lbs. |
| New Hampshire | 499 " | 1,100 " |
| Vermont | 4,286 " | 10,990 " |
| Massachusetts | 1,741 " | 37,690 " |
| Rhode Island | 450 " | 1,140 " |
| Connecticut | 17,538 " | 176,210 " |
| New York | 1,735 " | 6,340 " |
| New Jersey | 1,796 " | 5,200 " |
| Pennsylvania | 47,262 " | 33,110 " |
| Delaware | 4,158 " | 458 " |
| Maryland | 1,290 " | 8,530 " |
| Virginia | 3,191 " | 7,720 " |
| North Carolina | 3,014 " | 8,050 " |
| South Carolina | 2,080 " | 6,930 " |
| Tennessee | 1,217 " | 25,090 " |
| Kentucky | 737 " | 5,810 " |
| Illinois | 1,154 " | 4,250 " |
| Ohio | 4,417 " | 31,500 " |

About 371,000 lbs, in 1844, equal to 30,000 bushels, which would employ 25 reels for six months. The amounts for 1840 are actual, being taken from the census of that year; those of 1844 are from the report of Mr. Ellsworth, Commissioner, who procured his information through the facilities and means of the patent department. Mr. Van Epps stated that the amount of 1844 was over-rated by the Commissioner; but that there had been a very large increase in the four years. Already, the production of cocoons exceeds the power of the reeling establishments to reel it. The want of capital is the great difficulty. The most of the cocoons produced in the north are reeled by the producers, and made into sewing silk and fabrics by themselves; those of the South are largely sent North, for reeling. It is admitted, that the raw silk of America is superior to any produced in Europe. Mr. Van Epps stated that nothing now was needed but the investment of capital, the patronage of the public, and the encouragement of the Government or States to make the production of silk, raw and manufactured, a vast branch of industry. The requisite skill and knowledge we now possess. To the agriculturist it is of vast importance. Our country can produce cocoons unlimitedly, and find in Europe a consumer, without a rival. England pays annually to France and Italy, $30,000,000 for raw or reeled silk to manufacture. America may monopolise the whole of this, and add vast wealth to our country. Not only so, but she may supply all Germany with raw silk for their manufactures. Time will bring all this about; but will not our farmers and planters hasten the good work?

Mr. Clark then offered a resolution, which was adopted, for the appointment of a committee to consider and report upon the expediency of action on the part of the Association, in devising and procuring the establishment of a silk manufactory in the vicinity of New York.

Dr. Gardner then read a paper on the proper rotation of crops. He advised the following course, viz.: 1, roots (turnips, carrots, parsnips, &c.), or corn; 2, oats; 3, clover; 4, wheat; 5, beans, or potatoes; 6, clover; 7, wheat. Some discussion followed the reading of the paper, in which Mr. Maxwell, Mr. Veeder, and Prof. Mason, took part.

Prof. Mason read a letter from Mr. G. Wilkinson, of Dutchess Co., stating that he proposed the opening of an Agricultural School in Dutchess Co., New York, and asking the favorable consideration of the Association. The matter was referred to a committee, consisting of Prof. Mason, Mr. J. F Sheaf, and Dr. Underhill.

Mr. Gardner G. Howland, through Mr. Pell, tendered to the Association the use of his fine farm of 300 acres, with all his farm stock, &c., at Flushing, L. I., for five years, free of charge, for the purpose of establishing an Agricultural School, and an experimental farm. Mr. P. stated that the farm last year produced 300 tons of hay; is in excellent condition, and may be made highly productive at once; and furnishes the requisite capital to commence such an institution as has been for a long time deemed necessary.

A vote of thanks to Mr. Howland was passed, and the following committee appointed on his noble gift and project, viz.: Hon. L. Bradish, G. G. Howland, Chancellor McCoun, S. Knapp, A. P. Halsey, A. H. Stevens, H. Maxwell, J. F. Sheafe, A Stevens, S. T. Jones, J. B. Parsons, and R. L. Pell

Mr. Pell also announced Mr. Sheafe as a subscriber to the fund for the importation of Alpacas to the amount of $500; and letters were read from Mr. D. D. Campbell, of Schenectady, N. Y., subscribing $600; and from Dr. Wm. Ferrell, of Sparta, Geo., subscribing $300 for the same purpose

THE SUN FLOWER.—This plant should be cultivated much more than it is at present, in rich soils. It yields a large quantity of seed per acre, and it is especially valuable for fatting poultry, making the flesh exceedingly sweet and delicate. It is also excellent food for cattle, more especially when ground up with a mixture of other grain. It is said that from 30 to 40 lbs. of oil can be extracted from 100 lbs. of seed, and that it brings a good price. The leaves make good cigars.

## ROCKY MOUNTAIN WOOL.

ENCLOSED is a sample of wool taken by myself twenty or thirty years since, from a pelt which had been neglected, and the moths had eaten most of the wool from the skin. It was said the sheep was killed beyond the Rocky Mountains, by a company in the employ of John Jacob Astor, Esq. You will perceive jar or hair mixed with the wool, which, if I rightly recollect, stood out prominently beyond the wool, and might have been separated. The wool you will find very much like cotton. The sample sent has been injured by moths. If sheep of this description could be obtained and domesticated, it might be an advantage to our manufacturers as well as the agriculturists.

I think the introduction of the Alpaca will add to our agricultural amusements at *least*, and that they can be introduced at less risk and less expense by *driving* them from Peru to Panama, or some other place in the Pacific, and then across to the Caribbean Sea or the Gulf of Mexico. H. WATSON.

*East Windsor, Ct., Feb.* 23, 1846.

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The wool enclosed by our correspondent is very soft, and of a medium quality. We wish some one would act upon his hint, and undertake the domestication of the Rocky Mountain sheep. Their fleeces and forms might be greatly improved by proper care, and the size increased; and there is no telling what utility rearing a good flock of them might lead to.

## A LEAF FROM A FARMER'S LEDGER.

*Root Crop.* 1845. *Dr.*

| | |
|---|---|
| April 20. To 70 loads of night soil compost, at $1 per cart load | $70 00 |
| April 20. To plowing one acre and one-half | 6 00 |
| May 24. " plowing do. do. | 3 00 |
| " " 6 hands 3-4 day each, *a* 75 c. per day | 3 37 |
| May 26. " 7 do. equal to 4 2-3 d'ys work, *a* 75 c. | 3 50 |
| June–July " 20 days work, *a* 75 c. per day | 15 00 |
| " " work of haying hands, *a* $1 25 pr day | 6 25 |
| Oct.–Nov. " 18 d'ys work harvesting, &c., *a* 75 c. per day | 13 50 |
| " Seed, marketing, &c. | 6 00 |
| " Interest on one and one half acres, *a* $100 per acre, *a* 6 per cent | 9 00 |
| Dec. 30. Crop account to balance | 88 77 |
| | $224 39 |

*Cr.*

| | |
|---|---|
| By one half of manure, as above | $35 00 |
| " 26,400 lbs. carrots, *a* 40 c. p. cwt. or $8 p. ton | 105 60 |
| " 27,930 lbs. beets, *a* 30 c. p. cwt. or $6 p. ton | 83 79 |
| | $224 39 |

The night soil compost charged above was made of night soil, of which I get in the spring and fall 10 to 12 cords per day. This, for the upland, is composted with muck, adding half a bushel or a bushel of ground plaster to each load of 5 or 6 feet. I have charged it at one dollar per two-horse cart load, which from my accounts appears to be the cost of it on the field. It is carted on to the land in the winter, or early in the spring, as opportunity offers, taking care to cover the piles in the fall with sea-weed, to prevent their freezing hard.

On the 20th of April I plowed in the corn stubble, and more than half of the manure, as deep as it could be, with Messrs. Ruggles, Nourse & Mason's large size two-horse plow. The balance of manure was plowed in May 24th, when we raked the ground as it was plowed. I seldom harrow root ground, preferring to plow deep, if stubble, in the fall; if not, plow deep in the spring, as early as circumstances admit. Then, after corn planting, plow again, but not deep, having hands enough to rake the ground with common hay rakes, as it is plowed; this is easily done by back furrowing, as you can then rake the stones and other obstructions to the sowing machine, into the furrows. I this year planted later than usual, but prefer earlier planting, that the crop may be more out of the way of haying. I have charged $6.25 for labor of haying hands, and presume the amount covers the cost of their labor. Haying, as you are aware, is quite an important matter with me; I then have from fifteen to twenty hands, and occasionally they work an hour or two weeding or hoeing.

My carrot crop this year was not equal to that of the year before, probably one-fourth less. The yield, as you see, is not large; the quantity mentioned in the account being the product of an acre. The beets came up very badly; but, by transplanting, the yield was about 1,396½ bushels per acre: I reckon 40 lbs. per bushel. The 1st day of July I found the beets had come up in bunches—not more than one-half the ground being seeded. On the 3d, it threatened rain, we then transplanted nearly one-half of the crop. At harvest, the transplanted roots were equal to the others; they bear transplanting almost as well as cabbages. The carrots I planted in rows 16 inches apart, the beets 20 inches. Would it not be better to plant 27 to 30 inches apart, and use a cultivator instead of a hoe? [Yes; or 36 inches apart is yet better. ED.] In harvesting carrots, I have plowed them out, by letting the land side the plow run next to the roots, and crowd then into the open furrows; but the best way is to dig them with a spade. I generally begin early in October to dig them, digging two or three cart loads in the morning, and carting them into the barn in the afternoon; top them in the evening, and feed the tops to the cattle next day. They are very fond of them, and what they leave will do for litter; then let them go into the barn cellar for the hogs to work over. I fed, the year before last, several hundred bushels of carrots to my hogs. They answer very well to begin on, as they come in early, when farmers are generally short of feed for horses and hogs. They may do to fatten *other* people's hogs, but *I* shall not try them again, for I experimented on them till I came to the conclusion that it was like feeding them with sawdust and meal, the more meal you mix with the sawdust the better the hogs fatten; but for cattle and horses they are excellent food.

My horses are worked as regularly as a dray-team in the city. Nothing but *bad* weather keeps them in the stable. If there is no work at home, they go to the beach or some other place, for manure; there is always something to pick up, that when *seasoned* under the barn proves good manure. My experience has proved to me that it is the most economical to have help enough for common farm work, and to let the teamster keep the team moving. From

October to March, I feed half a bushel of carrots and three quarts of cob-meal to each horse daily. They keep in good flesh, and I think they are better than if fed on grain alone, or rather, if the value of the carrots was given in grain.

There are other considerations of importance to the farmer in root crops. The extra quantity of manure and the fine condition they leave the land in for any other crop, I consider carrots and sugar-beets among the most profitable crops that I grow.

*Lynn, Mass., Feb.*, 1846. J. H. C.

## THE ROW CULTURE FOR WHEAT.

In the last volume of the Agriculturist, it is recommended that farmers should sow wheat in rows; and it has been a matter of astonishment to me that the agricultural press has not urged this subject more, and that farmers have not made experiments at least, and reported progress. Although I have been a subscriber to the Genesee Farmer from its commencement, and to the Cultivator since the union of the two, and also to your paper since its commencement, yet I have not seen in them as much on this subject as would fill one side of this sheet (*a*).

I will relate, as briefly as I can, what experience I have had on the subject. Three years last September, I left a few rods square unsown, in the middle of a twenty acre lot of clean summer fallow, the harrows passing over it two or three times while harrowing the rest of the field; I then immediately drew little drills with a hoe, 12 or 15 inches apart, and sowed wheat in them, covering it up with the hoe. When the ground became sufficiently dry in the spring, I went to the patch with my hoe, and hoed the spaces well, once over, pulling out such weeds in the rows of wheat as were likely to prove injurious. On one other occasion, when the wheat was knee high, I pulled out a few more weeds from the rows. When the wheat was ripe, I reaped the drilled patch by itself, and an equal space of ground of the sowed wheat adjoining; the two lots were threshed separately, cleaned, and weighed, and although I have not the note of the exact amount of wheat, quantity of ground, &c., yet I perfectly well remember that the result was in favor of the drilled wheat, 10 bushels per acre, it being at the rate of nearly 37, and the sowed wheat, 27 bushels per acre. I was surprised at this result, as the straw was longest and the sheaves largest on the sowed part. The heads, however, on the drilled part, were larger, the straw stouter and heavier, and the grain plumper.

A similar experiment on a few square rods of ground was tried the following year, but from carelessness no calculation was made. The drilled wheat, however, was kept separate, and was at the rate of 38 bushels per acre; it had the advantage of growing on the richest part of the field. This, however, was not the case in the experiment of the year before. These two small experiments are all that I have made in drilling grain, during more than 20 years that I have been engaged in agriculture in America. The want of a drilling machine, and the presence of stumps and stones, have rendered it difficult to do much at it; and now that these obstacles, except the first, are no longer felt, loss of health interposes to prevent much experimenting, or the adoption of new and unusual methods.

Many years since in England, I put in a field of six acres of wheat (a clean fallow, clay land, and rather poor) on the plan practised by Tull. It was plowed into ridges from 4 to 5 feet wide, and two rows of wheat 8 or 9 inches apart, drilled as near as possible in the top of each ridge. The after culture was strictly Tullian; a good furrow was plowed from the rows of wheat before winter, and plowed back to the wheat in the spring, when the narrow spaces were hoed by hand, and all weeds pulled out; two more furrows were plowed from the middle of the alleys towards the wheat, when it was from one to two feet high. The crop was kept by itself, and yielded 32 bushels per acre of the very primest wheat—our usual crops were from 15 to 40 bushels per acre. Perhaps there may not be much advantage in this wide system of wheat, except we wish to cultivate it for many years in succession. I find by referring to Tull's book, that his sixth crop was better than any of its predecessors on the same land, *without manure of any kind!* and I was informed that, in a later edition of his book, published a little before his death, it was mentioned that he had the *thirteenth* crop growing on the *same land without dung* or *summer fallow*, during the whole 13 years, and that it was the most promising crop of the whole thirteen! I do not know the number of bushels per acre raised by Tull; he does, however, incidentally mention 6 quarters (48 bushels) per acre as one of his crops.

If I understand Tull, his opinion was that land naturally suited for any crop, and once put into prime order for producing that crop, will continue to produce good crops till the world's end, provided the crop is so planted that half the land can be tilled while it is growing, the tilled half being more enriched by imbibing the fertilizing particles in the dews and rains, than the other half is impoverished by the crop, so that the land grows richer every year. If this is true, the knowledge of it is of immense value, and if false, it is time that its falsehood should be shown by actual experiments. Its falsehood, in theory, has often enough been shown of late, but nothing is proved by *closet theories* till carried out in practice.

*Auburn, Feb.*, 1846. A Subscriber.

(*a*) If our Correspondent will look over the back numbers of the Agriculturist again, he will find frequent recommendations (short to be sure) there to sow wheat in drills, particularly in Vol. 4, page 240. We should have written more on this subject, had not two of our friends, who are large growers of wheat, promised us some articles. The principal objection we have heard to drill sowing in this country is, that it *tillers* out much more than when sown broadcast. We cannot understand how this should be, if the drills are not over one foot apart; and if it does tiller out more, will it not produce a greater crop, provided the soil has the elements in it to form a due proportion of grain to straw? We shall be glad to hear from experienced wheat growers on this subject. We must confess that we are greatly in favor of drilling in wheat as well as most other grain crops.

## RAMBOUILLET MERINOS.

In the February No. of the Agriculturist, I have read some very interesting statements respecting the excellent flock of sheep owned by Mr. H. S. Randall, of Cortlandville, N.Y., over the signature of L. The whole bears internal evidence of the production of a fair and high-minded writer, who would scorn an act of injustice. I honor the head and the heart of the writer, and readily acquit him of the charge of *wrong intention*. I have often heard of the sheep of Mr. Randall, and have no doubt they are a flock well established, and deserving commendation.

In establishing the claims of a good flock of sheep, it is a common method to compare them with some flock of acknowledged merit. This is all well, provided no injustice is done to the one, in order to render the comparison between the two partial and one-sided. But injustice is sometimes done inadvertently, and so I apprehend in this case, in the references which are made to the Rambouillets.

I have not owned the Rambouillet flock long enough to give any statements in regard to weight and quality of fleece after shearing, from my own observation, and your correspondent implies that such statements have never been made by any one. If he will look into Vol. 2, page 100, of the Agriculturist, he will find statements made in this regard by the Editor himself.

Then as to strength of fibre of Mr. Randall's sheep, as compared with Mr. Collins' Grandee, ascertained by Dr. Emmons, the State Geologist, your correspondent says: "The wool of Mr. R.'s prize ram decidedly exceeded that of Grandee—the best buck of the Rambouillet importation; and supported a greater weight, or, in other words, was stronger in proportion to its diameter. It as far exceeded various rams of early importation."

I should like to ask your correspondent how long since the specimen from Grandee was shorn; for he has been dead for a considerable time, and I believe was last shorn in the summer of 1842. How much had that specimen lost of its strength by age, repeated handling and pulling, and the wear and tear of being carried in some wallet in some man's pocket, till *half its original strength* probably was gone? Perhaps he can tell us how much allowance should be made for this, and the operation of similar causes. How was the exact diameter of each specimen ascertained? by guess-work, by measurement, or by counting the number of fibres constituting the cord to be broken by weights? Dr. Emmons is doubtless a good geologist, and meant to make a fair trial of these samples; but how much does he know about wool and sheep? Again, where are those "various" rams to be found "of early importations," against which the strength of fibre of Mr. R.'s sheep was tried? I was not aware that there were such Rambouillets, or even the wool of such in the country. If the trial was with samples of wool which had been preserved since the early importations, it would seem to be desirable that it should be known how *old* they were, in order to know how much the experiments proved. I *must* think the tests in these cases *very, very imperfect*, from the nature of things.

Again, your correspondent says: "Like the Rambouillets, these sheep are of large and fine carcase, but unlike them, are short in the leg, and the ends of the wool are usually coated with a dark gum. It is barely tipped with gum, say for one-eighth of an inch. Within that and to the skin, the wool is a glossy white, and freer from hard gum than the Rambouillet." Did he ever see and examine my flock of Rambouillets, and rigidly compare it with our native Merinos? If not, then has he ever seen any other thorough-bred Rambouillets? I suspect he has not; for if he had, he would not have represented them as "long-legged sheep," and having "*hard gum*" in the fleece, when in truth they are sheep of about medium length of leg, and are entirely *without gum* in the fleece.

I should not have said thus much, had I not found that the communication of L. would tend to create the impression that the Rambouillet sheep are what they are not, and that the public mind might be misled. I am largely the owner of American Merino sheep, of a very similar character to Mr. Randall's, as, I suppose, heavy shearers, and I am free to say, that I consider the Rambouillet as far superior to any Paular, Escurial, Guadaloupe, or other variety of American Merinos, while I at the same time honestly believe and openly maintain, that we have some very valuable American Merino flocks. Mr. R.'s flock is doubtless among the number; and he deserves great credit for the spirit and liberality which he has manifested in establishing it. I am a friend to improvement wherever I see it, and I hope I have a mind large enough to acknowledge merit wherever I find it. I am not in competition with any man, in any of my pursuits. My husbandry operations are *secondary* matters altogether, which I pursue at my leisure for my own relaxation from study, the benefit of my family and the public good.

I have merely to add, that the only true way of testing the quantity and quality of fleece wool, is by *thorough cleansing* by a good manufacturer, and the price he will pay for it when it is thus prepared for working. For my own part, I am determined to test the value of my Rambouillet buck, Grandee, and some of the Rambouillet ewes in this way, side by side with my heavy shearing Merinos, and the public shall have the result and judge for themselves.

I invite Mr. Randall, and any others disposed to try it, to submit their best buck's and ewe's fleeces to the same test, and let the public know how they come out. I give this invitation to all wool-growers, not as a banter, but in order that in this great interest we may find out where we are. This is a test that will be perfectly fair, and to which none can object, and we shall then know whether we are raising wool or not; and whether we have good cause to complain of the low prices which the manufacturer is disposed to give for our "heavy fleeces."

L. G. BINGHAM.

*Williston, Vt.*, Feb. 13, 1846.

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P.S. It may not be improper to add, that in the judgment of most men who examine the Rambouillet flock, they will average five pounds per head of clean-washed wool, of one year's growth, and I hope to increase their clip beyond this hereafter.

## SCRIPTURE'S CARRIAGE WHEEL.

*Description.*—A, Is a perspective elevation of the wheel entire.

B, Is a detached, or one-half part of the nave or hub, in which rests the ends of one-half of the spokes.

C, Is a cross section of the entire wheel, showing the position of the spokes and the separate parts of the hub.

*a a a*, Represent the pipe-box, passing through the two naves, or cheek pieces, *c c*, having on the inside a connected flange of the same diameter as the naves, and covering the open end of the one next the vehicle, while at the other end a screw thread is cut to receive the screw flange, or front of the hub, represented by *b*, which, by means of a wrench, is screwed firmly upon the pipe-box; by which means the two naves being accurately fitted to the pipe, are made to approach each other, thereby causing the spokes to act as powerful levers, and producing the same effect that is sought to be obtained by re-setting the tire of the ordinary wheel, but with the very important difference, that while the one is effected by a considerable expense of time and money, and with a positive injury to the wheel, the same result is brought about in the other by a few minutes' application, and without incurring any expense or injuring the wheel.

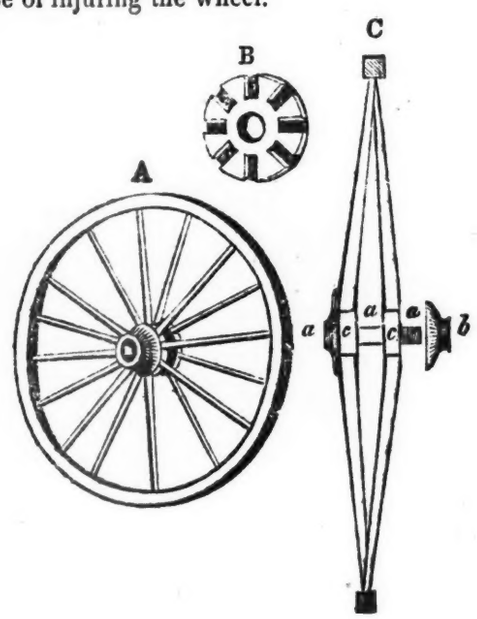


FIG. 33.

Ordinary wheels become rim-bound in consequence of inadequate support in the hub; while by this method of constructing wheels, this difficulty is obviated at once, by applying the wrench to the hub, and turning it up, more or less, as the case requires.

In dry weather, wheels are apt to become loose, from the shrinking of the wood, and one day's use in that condition damages them more than one month's wear when in good order; which can always be maintained by a proper pressure of the spokes to the rim. The felloes of wheels may become loose under the tire, also, by the settling of the spokes in the hub; but constructed on the above principle, it is maintained that by the most ordinary attention the spokes are kept constantly to their proper bearing, and the felloes firm to the tire, in consequence of which *the tire will not require to be reset until worn out*, and the woodwork being kept firmly in its place will wear much longer.

In case of an accident to a spoke requiring it to be replaced, unscrew the nut flange, draw the pipe-box from the nave, remove the broken spoke, insert a new one, then replace the pipe-box, and screw up the hub, and your wheel is at once as firm and strong as ever. The ends of the spokes do not require to be tennoned where they rest in the hub, but enter with their whole size, giving them all the bearing surface they can have, and adding to their durability. In all other respects the wheel is put together and tired, as is the wheel now in use. Any farm or plantation hand is fully competent to keep the wheel in order; and in case of the breaking of a spoke, the most ordinary skill is sufficient to repair the damage, without resort to the wheelwright.

Among the advantages claimed for this wheel is its great economy in use, consisting in the durability of the hub, which will last for a generation, the saving of two or three visits to the wheelwright, while each tire is wearing out, and his bills for re-setting the tire, &c., as many times, and the consequent protection of the woodwork from the burning and shrinking of the tire.

In its construction the wheel presents far greater strength than the common wheel, besides having the convenient application of mechanical power, as before set forth, to keep the wheel in constant order for use until the tire is worn too thin to be run any longer with safety. This wheel is applicable to *every description* of vehicle, both light and heavy, and will prove of great importance in warm climates, where the alternate wet and dry seasons are very destructive to ordinary wheels, the evils of which are without expense avoided by the above method. E. S. SCRIPTURE.

*Stapleton, Staten Island, N.Y.*

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EXPERIMENT WITH GUANO.—I had plowed one acre of greensward about the 1st of August last, and divided it into equal parts for quantity and quality, as nearly as could be. On the 3d of August, on one half I spread 51 bushels unleached ashes; on the other half I sowed broad-cast, 250 lbs. Guano; then sowed turnip seed broad-cast, through and through, and harrowed all in, going through and through without regard to the division. In two weeks the line of division was perfectly perceptible to the eye one hundred rods distant. From that part on which the guano was sowed I gathered 113 bushels turnips; on the part ashed, I gathered only 43 bushels. The ashed turnips were gathered four or five days later than the guanoed. I commenced gathering about the 8th of November, and finished about the 16th. The guano was from a cargo imported by Messrs. Miner, Lawrence & Co., of this City.

Cost of 51 bu. ashes, $8.50. Produced 43 bu. turnips.
" 250 lbs. guano, 7.50. " 113 " "

*New London, Ct.* WM. P. CLEAVELAND.

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Take good care of your meadows now, that cattle do not poach them and feed off the early grass.

## NECESSITY OF A KNOWLEDGE OF CHEMICAL PRINCIPLES TO A FARMER.

It will be my object, in the few brief remarks I intend to make in this paper, to illustrate, by some familiar examples, the absolute necessity of a knowledge of the principles of chemistry, to every one who expects to carry on the operations of the farm, or even domestic affairs successfully.

*Heat* is one of the great agents of nature in effecting her changes, and modifying her results. What heat is, whether matter, or some effect or result of matter, is yet unknown. Great heat is always attended with light, and it is probable that, in all its degrees, it is inseparable from electricity, and perhaps is identical with it. But it is my present object simply to show, by some practicable examples of every day occurrence, some of the laws by which it acts.

Heat expands, with some slight exceptions, all the objects into which it enters. Thus, a cold hand is shrivelled; but warmed, it is more plump and full. Every one knows that a boot or shoe that is too tight for summer use, can be comfortably worn in the cold of winter. An ordinary metallic pendulum that keeps correct time in summer, by its contraction, will beat too quick, and consequently produce fast time in winter. An iron bolt, when fastened while hot, will contract on becoming cold, and close up a seam, which the power of man, with the lever and screw, could not effect. The blacksmith sets his iron on the wagon wheels while red hot, and immediately cooling it, he sinks it sometimes half an inch on every side in the wood. The common thermometer is another illustration of this principle.

Fluids partake largely of this expansibility by heat. But its effects are more strikingly illustrated in air or gases, than in any other substances. The particles of matter of which these are composed, are more easily separated and kept asunder, and they feel the influence of heat in a wonderful degree. A cubic inch of water when converted into steam occupies 1700 times its original space, even when nearly of the same temperature. The principle on which all steam engines are propelled, is solely that of the expansive power of water and vapor by the application of heat. Thus, the heat yielded by a handful of wood, passing through a half-inch iron boiler into water, and then expanded into steam, will produce an effect that the combined strength of 100 horses could not accomplish. Heat produces nearly all the changes of weather, by the rarefaction (or expansion) of the air, and the consequent currents of that fluid which necessarily follow; for as the heated air becomes necessarily lighter by expansion, and rises, heavier air rushes in, frequently from an immense distance, to supply its place, and hence storms and sometimes hurricanes, whose violence is proportionate to their cause; and so if the air suddenly loses its heat, the neighboring warmer air hurries to supply the partial vacuum.

Heat (another form of electricity perhaps, or in all cases associated with it), is also the great agent of vegetable life, giving direction and effect to the moisture and other elements of vegetables, when the embryo plumules and cotyledons burst from the germ; nor is its vivifying influence withheld for a moment from the growing plant, till the entire work of reproduction is accomplished, and the seed is fully matured which is to perpetuate other generations through the whole course of time.

The most striking exceptions to the expansive effects of heat, are in clay, and water below a certain temperature. The former contracts through the highest known temperature that can be given to it; and a thermometer for furnaces, called, from the name of its inventor, Wedgwood, has been constructed from this material, which is not injured by the most intense heat known. Water continues to contract till it reaches a temperature of 39° Fahrenheit, when by a merciful exception to the general law, it begins to expand, and continues till it reaches 32°, the freezing point, when it congeals. This keeps the cold water on the surface till it freezes, and this change of the liquid into a solid still farther diminishes the density, thus keeping the whole body of water in lakes and rivers beneath, in a condition to minister both support to its inhabitants, and the wants of man, and allow the surplus water to pass off towards the ocean.

The admission and retention of heat in bodies is much affected by their substance and surface. A dense body will receive and retain more heat than such as are light and porous. A rough surface imbibes heat much quicker than a smooth one when exposed to the rays of the sun or a fire; and when at a higher temperature than the surrounding atmosphere, parts with its surplus heat more readily than such as are smooth. The color of bodies has much to do with receiving and repelling heat, and retaining or parting with it. A black surface, when exposed to a high temperature, soon becomes hot, while such as are white require a much longer time, under similar exposure, to reach the same temperature. Many substances of nearly equal density *conduct* heat with much greater facility than others. Let us consider for a moment some beautiful examples of the application of these laws.

Animals and birds inhabiting the arctic regions, where the cold is intense, are not only covered with thick fur and down, both of which are the best known conductors of heat, but on the approach of winter most of these change to a white color, which of all others is the worst conductor. During a great portion of an arctic winter, there is absolutely no sun, and for the remaining portion but a mere glimmering of his rays. All the warmth of living things in that region, therefore, is generated within the covering of fur or feathers, by the combination of the carbon of the blood derived from their food, and the oxygen of the air inhaled into the lungs, and all of which heat is most economically husbanded for the comfort and preservation of the living being.

The warm-blooded animals that live in the Arctic ocean, whales, porpoises, seals, walruses, &c., &c., are not less protected than those on land, though in a different manner. Fur or feathers, if constantly immersed in water, would after a time admit it next the body, when a rapid lowering of its temperature would take place. Almighty wisdom has guarded the animals which live in that element in a manner totally different, yet equally effectual with such as live in the air. They have a smooth,

naked skin, or sometimes covered with a thin hair, which is no impediment to their rapid passage through the water; and underneath is a thick covering of *fat*, which, though vastly denser than fur or feathers, is nearly equal in its non-conducting properties. So, too, in our own climate, the hog, which is the only animal not sufficiently protected against the rigors of winter by an external covering, takes care to supply this deficiency effectually, if allowed to indulge his gormandizing propensities, by loading the exterior of his carcass, immediately under his skin, with a thick coating of fat.

The temperature of the human being has to be provided for, through the extremes of winter and summer, by external clothing, though in extreme hot weather, a portion of his excessive heat is carried off by perspiration, which involves another beautiful principle of chemistry, that we have not time at present to illustrate. *Black* is the warmest clothing when exposed to the sun's rays, and the coolest when deprived of them; *white* is directly the reverse. Consequently, there is no more unsuitable color for clothing, where temperature alone is regarded, either for winter or summer, than *black*, and none more proper than *white*. The effect of black is somewhat obviated by using white linen and under clothes.

*Black soils* are more productive than such as are light colored, when in other respects they are equally charged with the elements of vegetable nutrition. They rapidly absorb heat when exposed to the rays of the sun, and as rapidly cool when they are withdrawn. Both of these effects are highly beneficial to vegetation. The heat which the soil acquires during the day, stimulates the action of the roots and growth of the plants; and the rapid cooling of the surface causes the dew with which the air is charged to be deposited early, and in large quantities, during the evening. Some gardeners use white sand on the top of the soils, "because," as they say, "it is so heating." Had they a knowledge of some of the first principles of chemistry, they would at once see the absurdity of the practice. Were the sand black, or of a dark color, the practice would be commendable, as it would *conduct the rays to the roots of the plants*, which its white color *reflects*. The sand is highly useful when *mixed* with many soils, but is objectionable when placed on the surface. Pure sand is frequently hotter than dark earth in similar situations; but it is because it is *drier* and a non-conductor, and retains what heat is imparted to it, while the evaporation of the moisture, and the *heat-conducting* properties of the dark soils, carry off the heat. A pure white or very light colored earth can never be fertile. Very luxuriant vegetables are always dark colored when growing, and their color helps their growth in two ways—and for the same reason that dark soils do, viz: by conducting the heat into the plant while the sun is up, and again conducting it off when down, by which there is a rapid and plentiful deposit of dew upon it.

White buildings reflect the sun's rays, while darker colors absorb them; consequently, those which are white are vastly more durable than such as are very dark. It would be more economical to use white for all the buildings, fences, tools, &c., used about a farm; even carts and sleighs and carriages would last much longer by substituting drab or light colors, for the black or dark browns usually adopted. When black is used for carriages, its bad effects are in a considerable degree prevented by the use of varnish, thus leaving a smooth polished surface, which reflects much of the heat. When not exposed to the direct rays of the sun, of course, there is no difference between this and other colors. The philosophy of placing plants that require much heat on the south side of white walls is obvious. They reflect the rays of the sun upon the plants and soil covering the roots, thus affording them a double supply of heat. The white exterior of the wall arrests and sends back the rays that fall upon it, precisely as the amalgam, or quicksilver, on the back of a looking-glass arrests and sends back those which would otherwise be transmitted through it. A kettle or pot covered with soot, has the greatest advantage for absorbing heat, and when exposed to a fire, it will raise a liquid contained in it to the boiling point in half the time that a bright polished surface would do, if similarly exposed; and it will cool when withdrawn from the fire, in equally less time. The blackened tea-kettle is, therefore, the proper vessel to heat the water, and the white porcelain, or highly burnished metallic tea-pot, the proper one to maintain it hot for the longest time.

*Buffalo, Feb.*, 1845 R. L. A.

## SHEEP AT THE SOUTH.

You say you are desirous of having from me some account of the different flocks of sheep I saw during my hurried trip North. This I have pleasure in giving you; and hurried though my trip was, I saw much that interested me, and particularly connected with sheep matters, such having been the main object of my journey.

Every thinking cotton-grower is fully convinced that too much of that staple is produced. All are anxious to lessen that over-production; but they also feel the absolute need of a substitute that will profitably employ their negroes, and occupy their lands. What this substitute shall be, is the difficult point, and one that will not readily be overcome. The cotton crop affords no time for attending to others; from New Year's day until Christmas, it keeps every hand engaged in its culture incessantly occupied. Like corn, it can only be grown to advantage on good land. Something that will yield a profitable return on the poor and worn parts of our plantations, at the same time admitting of such a system in their cultivation as will improve the soil, and not interfere too much with the main crop, cotton, is what we want. Other *crops*, unless it be oats, millet, and other fodder and grain crops, such as peas, sweet potatoes, and so on, interfere too much with cotton. And though I am of opinion that it could easily be proved that almost any of these, and tobacco, flax seed, castor oil leaf, mustard seed, and many others are, any of them, more profitable than cotton; yet the fact of their occupying such land as the planter would desire to put in his accustomed crop, and requiring considerable labor at those times that it is most needed in the cotton field, will render it difficult to introduce auxiliary crops.

It has always seemed to me that, after employing all the labor we can in home manufactures; in the raising of *heavy* crops of grain so as to supply the home demand, keep work animals fat, and raise and fatten abundance of pork; next to these we could keep *sheep* enough to sell 100 pounds of good wool to the hand—employ a few hands profitably, and so as to have them in the cotton field when most needed—occupy our worn lands to advantage, and, by a little judicious management, bring them back to their original state of fertility. All these would be objects well worth attaining, if practicable; and of this I could very quickly convince you, had I the leisure.

The poorest worn lands of this part of Mississippi will grow Bermuda grass enough to support an average of two of our native sheep to the acre, and will improve each year to such an extent, that within as many years from five to seven head may be kept. Sheep enrich land more rapidly than any other kind of stock; the Spaniards, you know, say that "sheep have golden feet,"—and, in this sense, they certainly have. This grass, too, keeps all it gets of top-dressing, until its sod becomes surprisingly close.

I would by no means wish to be understood as advising any one to abandon the growth of cotton entirely, for that of wool and mutton—unless, indeed, the land has become so much worn as no longer to yield a remunerative crop, and the planter might be inclined and have the means to open another plantation. But I would urge every hill-planter to procure a stock of sheep sufficient to yield say 100 lbs. of wool to the hand—first setting his worn lands in grass, to an extent sufficient for their abundant support.

To satisfy myself as to what kind of sheep would suit us best, was one great object of my journey. That we can grow as fine wool as is produced in any part of the world, I think is certain; though the assertion has been so often made and reiterated, that *in our southern climate the finest wools soon become mere hair*, or at best assume a much coarser character, that even our most intelligent planters have, many of them, taken it as an established fact—when, in truth, it is the mere assertion of your closet philosophers, without a single fact to sustain it. The belief has done much to prevent the growth of fine wool in the South.

It is not, however, necessary that sheep, to be profitable, should be of the fine-wooled breeds. Our native sheep, indifferent as their wool-producing qualities are, give us the finest mutton in the world. They are light-bodied, and long-legged—in my opinion the result in a great measure of their in and in breeding; give us about a pound, not more, of wool about the quality of Southdown, but of a much softer character—much of it closely resembling that imported from Cordova, under the five per cent. duty. Even as they now are, they are profitable; and to render them richly so, all that is needful is to cross them with almost any other breed. You may recollect the very superior samples of wool I showed you, from the lambs of those same naked-bellied ewes, by a superior Merino buck. The Saxony, Southdown, Cotswold and Bakewell, all bring about as great a degree of improvement, though differing in kind perhaps. But I am forgetting the intention of my present writing.

I commenced the handling of your northern flocks at Utica. The exhibition there was a very fair one, though more might well have been expected of the largest sheep-owning State, at her State show. I afterwards saw several of the flocks on their own walks. Of the Merinos exhibited, the ram belonging to the Messrs. Carpenter seemed to me the best animal; his coat was exceedingly close, and must weigh well; and the staple as fine as that of any Merino I ever saw. Mr. Reed Burritt, of Tompkins Co., N. Y., showed some large, finely formed animals, if one might judge of their form under such a coat of wool. Their fleece had not been cut last spring, and though heavy was full of yolk, and not remarkably fine. Mr. Blakeslee's flock is a very superior one; and not only those he himself had there, but the draft from the flock of Col. Sherwood, which originated from Mr. B.'s, attracted, and justly, great attention. Judge Smith, of Woodbury, Conn., had some very superior animals—Saxony-Merinos—being a cross from Mr. Blakeslee's best rams upon a very superior lot of Saxony ewes. It was this flock which first opened my eyes to the foolish prejudice, existing amongst a great many, to this cross; and I afterwards had repeated proofs that the best wool grown in the Union, if not in the world, is borne on the backs of the Saxony-Merino; and that the animals themselves are just as hardy, and nearly, if not quite, as large as any others, producing even moderately fine wool. Judge Smith is daily improving his flock. There were beautiful Saxonies, with their soft, pure, white, clean coats, from Vernon, N. Y.—drafts from the flocks of Messrs. Crocker, Church, and others. Their fleeces, and those of the Saxony-Merinos, will yield more perfectly clean wool than any Merino fleeces I have yet met with, having any claims to equal fineness, which few of them have; and I am fully inclined to believe that they will produce more pounds of wool than any other breed, and perhaps as many of mutton. I saw an excellent communication in the last number of the Quarterly Journal of Agriculture, on this subject, which is taken up in the proper manner. And the writer *may* be correct—that on applying a powerful microscope to fibres of wool from sheep of different breeds, that of the finest Saxonies in the country is found to be but little, if any, less in diameter than that from some of the largest sized Merinos, which to the naked eye seems comparatively coarse. He remarks at the same time, that the (*apparent*) cavity within the fibre is much larger in the Saxony; and adds that it is this, he believes, which gives it its silky lustre and soft feel. Now, in my opinion, it is its silky lustre that causes the appearance of a cavity, where, in fact, none exists, to be greater in this variety. He says nothing of the spiral turns in the fibre, and comparative number and fineness of the serratures, which produce its felting properties, and determines its value to the manufacturer, which last, by the way, is all the *grower* cares for. But I am again forgetting myself.

The only passable Southdowns were a few

shown by Mr. McIntyre; and his, though good, will not rate with some I could show you in this neighborhood. Indeed, I was disappointed throughout in the Southdowns I saw everywhere. The Bakewells, unless I may except two or three very fat wethers, fell far short of my expectation. The Cotswolds, on the other hand, as far exceeded them. With greater size than the Bakewell, and a much more valuable fleece, they seem to me, and I am confident are, animals of much better constitutions; they breed readily and regularly, which the others do not; though I presume the Bakewells will fatten at an earlier age. Mr. Sotham, of Albany, had a small lot of these beautiful and valuable animals, that pleased me exceedingly. At New York I afterwards saw a few from the flock of the Messrs. Hallock, which showed better keep than Mr. Sotham's, and were consequently much larger, and equally fine otherwise.

At Woodbury, Conn., is another flock of very fine animals—that of Mr. Marvin—which he asserts are pure Saxony. The wool is beautiful, nicely washed, and neatly put up and stowed away, waiting for a higher price. He and his neighbors assure me that his flock averages 3¼ lbs. per head, of well-washed wool. What flock of pure Merinos, producing wool worth fifty cents per pound, will yield more, washing the wool clean, so as to remove the yolk? At Lowell I met a number of the western Pennsylvania and Virginia growers, with their wool for sale; and in the Messrs. Lawrence's store-rooms I saw a number of the clips of that year. *Much of it is finer than any wool grown north of them*, and was so pronounced by Mr. Lawrence in my presence. The samples I brought with me from Lowell, as also those I took from the backs of the sheep when amongst them, tell the same tale, *and it is all Saxony-Merino.* I cannot now specify the flocks west of the mountains; but enclose you a few loose samples, the growth of western flocks, which you can examine and report upon. They have simply been washed on the sheep's backs. Mr. Aaron Clement, of Philadelphia, showed me some very superior Southdowns and Bakewells, which he had purchased to fill orders—which he makes a business of doing; and I know of no one I would sooner trust with a commission of the kind.

Your northern and eastern sheep-masters charge such prices for their animals as we cannot afford to pay, unless it be for a single ram occasionally. The freight and expenses upon stock brought such a distance are enormous; which, added to the prices asked, will prevent many being sold south or west. The breeders in Pennsylvania and Virginia have caught the lesson from their eastern neighbors, and ask equally exorbitant prices, so high that I came home without buying a hoof. They have all got an idea that the demand is going to be very great, and that it behooves them to charge accordingly. They will spoil their market.

The inquiry of which is the best breed for this latitude, I have discussed at some length in the New Orleans Commercial Times, and regret that want of leisure prevents my saying anything more at this time. THOMAS AFFLECK.

*Ingleside, Miss., 2d December*, 1845.

## AGRICULTURE AND LANDS OF FLORIDA.

WHILE so many farmers are emigrating from the east to the prairie lands and forests of the West, and even to the country whose shores are on the Pacific, it may not be unacceptable to many readers to know the capabilities of this southern land. There exists a very general impression that Florida consists almost entirely of swamps and lowlands, the exhalations arising from which are so destructive to human life as to render the country almost unfit for agricultural purposes. There is unquestionably much lowland, but very many locations can be found where it is high and entirely healthy, even in the summer. The river, St. John's, a wide and noble stream for 50 miles, is navigable for 200 miles from its mouth. For the first 30 or 40 miles, the land on its banks is very sandy, and its natural growth is pine. Such is the climate, however, that even this land is said to be quite productive, and will yield very good cotton, sugar, tobacco, and corn. As you proceed up the river towards Lake George and Monroe, the land becomes better, and there frequently occur rich hummocks, whose fertility is indicated by heavy growths of the cabbage, palm, ash, maple, and wild orange trees. These lands produce excellent sugar, the canes measuring several inches in diameter. At Pilatka, the climate is of a decidedly milder character, and orange trees which have been seriously injured below, have there entirely escaped the injurious effects of the severe weather of the present season. Immediately opposite Pilatka is one of the best orange groves in Florida, and I can imagine few things more beautiful than this collection of some 500 bearing trees. They are planted in rows twenty feet apart, and present a regular symmetrical mass of rich, glossy foliage. This grove, and those above it, have hitherto escaped the ravages of the insect, and the fruit produced is said to be of a remarkably rich and luscious quality. As the river passes into Lake George, there is an island of some 3,000 acres, called Drayton, on which are several fine groves, from which some 50,000 oranges were sent to market the past autumn. This also has thus far escaped the ravages of the insect, which has been so destructive in St. Augustine and other parts of the South.

Lake George is a fine sheet of water, about fifteen miles in diameter. The land on its banks is said to be of good character, but very little is yet taken up. From Lake George to Lake Monroe the river winds beautifully among the hummocks, and is fringed with the elm, the maple, and the alder, now in full leaf and bloom, while an occasional grove of wild oranges or clump of palms lend their novel beauty to the scene. As evening approaches, the tall cypresses become the roosting-place of numerous wild turkeys. They are often of great size, and are scarcely inferior to the domestic ones.

Some 30 miles before you reach Lake Monroe, the boat passes Beresford Lake, a small sheet of water, on which is an old plantation, formerly taken up and cultivated by Lord Beresford, but now deserted and overgrown. Just beyond this is Blue Spring, said to be the gem of Florida. Some 500 yards back from the river, is a very large spring, and a multitude of smaller ones, throwing up to·

gether a mass of strongly sulphureous water, and forming a little stream some ten feet deep, whose perfectly transparent waters empty into the St. John's. It is filled with fish, which can be seen swimming in every part of it. The banks are some twenty feet above the stream, quite undulating, and covered with palms, live oaks, magnolias, wild oranges, &c. It is altogether one of the prettiest spots that I have seen. Immediately back of Blue Spring is a range of country forty miles in extent, covered with pines, beautifully undulating, and no underbrush whatever. It is covered with a species of crab grass, which is said to make very good pasture. Where this kind of pine land occurs without any undergrowth of palmetto, the land is considered excellent for either sugar or cotton. Having a clay subsoil it can be readily improved, a rare case in Florida, for the land is universally of a sandy nature, and will not hold manure, and must inevitably be worn out in time. A favorite mode of manuring here is to pen cattle upon a certain spot until it is well manured and trampled in. From land thus prepared they sometimes raise 300 to 500 bushels of sweet potatoes to the acre.

Lake Monroe, a fine sheet of water, five miles in diameter, seems to be the spot about which settlers are gathering, and the best lands are fast being taken up. The whole margin of the Lake abounds with mineral springs, and the lands will often produce two to three hogsheads of sugar to the acre. One of the finest spots has been taken up by a gentleman who keeps a boarding-house for invalids. For this purpose the vicinity of Lake Monroe is well adapted, and houses for the accommodation of invalids from the North are going up every year. I have visited most of the West India Islands, South America, and different parts of Europe, and I am convinced, that for pulmonary diseases, there is no climate equal to that of Lake Monroe. This will become more generally known in a few years, and it will perhaps become the great place of resort. The advantages for bathing afforded by the numerous mineral springs (whose temperature is 75°), will render this vicinity very desirable. Living is very cheap there, from the great abundance of game. Turkeys are numerous, and deer are found everywhere. In a ride of 20 miles we saw sixteen of the latter. Steamboats run from Savannah to this place and to Lake Monroe, rendering the latter very accessible.

It has been a matter of surprise to me, that amid all the enterprise for which our countrymen are celebrated, no one has attempted to cultivate and prepare the dried fruits. Figs and grapes both grow luxuriantly here. The labor of preparing them for market is comparatively light, and I cannot but think that if some enterprising man were to establish their cultivation here, and import a first-rate hand from Smyrna to prepare them, he could not fail to reap large profits. The fig produces most abundantly, and its cultivation requires very little labor. There is no reason why we cannot supply our own market with that article of consumption. At present, the attention of all the planters about Lake Monroe is chiefly devoted to the produce of sugar. The labor of planting is about the same as that of corn, it requires cultivating only two or three times during the season, and the roots will produce five years without replanting. The cane can be ground at Taylor's mill, and the sugar made for two to three dollars per hogshead; the expense of putting up mills is thus avoided.

Some gentlemen from the North whose ill health compels them to reside there during the summer, informed me that the heat, although of longer continuance, is not so oppressive as at New York, and the trade winds render it quite pleasant after ten o'clock in the morning. They also say that there is very little fever in the country, although the whites (many of whom have no slaves) expose themselves freely to the sun. If such is the case, settlers could labor here with as much safety as at the West; while, from the genial climate, the reward of labor is much greater. I am of opinion, however, that no settler who wishes to thrive, should employ slaves. Their indolence, and the necessity of supporting the sick, the young, and the aged, would soon ruin him. One good white man would perform as much as three of the ordinary slaves, and among the many emigrants to this country, white laborers can easily be obtained.

One of the most profitable employments and modes of investment in East Florida is the raising of cattle. Intelligent planters inform me, that all their capital so invested yields them at least 30 per cent. annually. There are large tracts of pine lands which produce excellent pasture. A herd will double every three or four years; and the only labor in tending them is to collect them several times a year to keep them from straying too far, and to mark the young calves. When the vacuum process of curing meat shall be fully tested and brought into practical operation, the profits of this branch of business will be greatly increased.

Allowing in the facts that I have stated, a reasonable degree of partiality in my informants for the place of their adoption, I am quite inclined to think that the upper part of St. John's river, and the rich bottoms of the Alachua District, afford many inducements to settlers, who are convinced of the superiority of free to slave labor.

*Jacksonville, E.F., Feb.* 10, 1846. S. B. Parsons.

## SHEEP HUSBANDRY.

After so long a time, I will in some measure fulfil my engagement about writing you in regard to sheep and wool growing. My intention is, and has ever been, to get up a flock that would combine as much as possible the following traits: First, a strong constitution; a heavy fleece of *real wool*, of the very best quality that the world can boast; and a just form. It has been a favorite theory with me, that by judicious selection and good breeding, all this might be effected, and I have for years spared neither time, nor expense, nor travel, to bring it about: and if I have in any good measure effected my object, it has been by selecting according to my best judgment, disregarding entirely all names of breeds, and names of men as breeders, except so far as to examine their flocks carefully, or specimens of them, as they have been exhibited at the shows, or their different lots of wool at numerous manufacturing establishments.

I have never been able to depend in the least upon the statements of men who puff their sheep in the different agricultural papers. Some of them are

*extremely ignorant* of the things they write about, and are *deceived* even by their *own experiments*, and do not know when wool is really coarse or fine, whether it is clear, or will waste much in cleansing. Others keep but a few, and give them in that way an extra chance; not knowing, when they publish their statements, that a few sheep on a farm will keep (when almost entirely neglected) in better order, yield more wool, increase faster, and be much less subject to distemper of every kind, than the same animals would be if a farm were fully stocked with them. A few sheep, on a middling good sized farm, may be neglected in summer or winter, almost as much as the deer in the wild forest, and become very large, healthy, and afford monstrous fleeces, from the fact that they have so fine a range; a thing more favorable to sheep than all the care, hay, and grain, that can be given to a large flock. This is applicable to the very finest kinds of sheep, in common with others. This will account for a part of the fine stories we get from some merchants or professional men newly-turned farmers, or other new beginners with sheep, who ascribe their success to something very happy in their treatment, or peculiar in the breed of their stock, and they feel in honor bound not to withhold such light from the world. Others there are who stop at no means that will enable them to sell sheep for breeders at exorbitant prices; these publish accounts of what wool they get from perhaps a *single* buck, giving him some *great name;* fix him out with a pedigree, send a *picture*, not a *portrait*—of him, to some editor [who, in several instances that we could name, is *roundly paid* for his puffing. Ed.], call him a Paular, a Montarco, or some other *Morus multicaulis* name of a breed, to raise an *excitement*, and take the advantage of it, when their flocks are absolutely *contemptible!* I could mention a score of such gentlemen whose flocks I have examined, or whose lots of wool I have seen at Lowell and elsewhere. Others take the advantage of strong popular prejudice known to exist in favor of Merino over Saxony sheep; and knowing that most purchasers judge more by the outward appearance of a sheep than by any correct ideas they have of fleeces, will apply sperm oil, or some other grease, to the outer end of the fleece of a Saxony, or some mongrel of Saxony, Merino, and native stock, and oftener than otherwise, a mean animal of its kind, and sell him for a pure Merino buck. Others breed from Saxony sheep to some extent, to keep up in some measure the quality of their wool, crying down Saxony and crying up Merino sheep all the while, and selling their sheep as pure unmixed Merinos, giving you at the same time a pedigree that, with a little addition, would make an interesting romance! If any one would inquire how to distinguish under such circumstances, I would say the most correct information as to the quality of any man's wool is to be had from the best manufacturing establishments of the country; and, finally, after getting what information can be collected from different large manufacturers, the balance is to be obtained by a careful examination of the flocks so recommended, and a comparison of flock with flock, as to all important traits.

I have lately given to the Albany Cultivator the names of several wool-growers in different parts of the country who do not make much noise themselves in the periodicals, who, notwithstanding, are in my humble judgment entitled to some notice, as well as those who puff their own animals so finely. If persons who are prejudiced against the finer kinds of sheep on account of their being tender and delicate in proportion as they are fine, would select an equal number of the best constitutioned fine sheep, and put them side by side with the best they can obtain of the inferior grades, they would find that a very large share of all the advantage the coarser kinds have over the finest kind, is during the first four weeks after a lamb is dropped.

Some of the best flocks I have ever found in the country (after going over much of it time after time, beginning with Vermont and New Hampshire, and ending with Virginia), are a mixture of Saxony and Merino, where the breeding has been upward, as I call it (for want of a better expression); that is, where the advantage as to quality is on the side of the buck. The getting of really fine sheep in any part of the world is, I believe, the fruit of uncommon pains, nice discrimination, great perseverance, and incessant care; but it will cost nothing to reduce the quality of any breed, but to let it alone. It costs a considerable sum to raise the last stone on some of the monuments in our own country, and some skill, but a very ordinary man for a trifle would get them down.

A few years since Vermont was celebrated for its fine wools; but in the eagerness of sheep-masters for heavy fleeces, they have to a great extent lost their fine sheep. Five or six years downward breeding would entirely change the character of the wools of a whole nation. I have no doubt but an increase in weight of fleece may be effected while the fine quality is retained, and perhaps advanced; but, like every other real improvement, it must cost labor, perseverance, care, time, and skill. I am inclined to believe, that stock from the finest ewes, by a low woolled buck, will generally fall considerably below the average of each ewe, and the buck, as to quality of wool; and I am quite sure that many cases will occur where the stock will not (to say the least) exceed the buck. Such is the downward tendency of almost everything we have to do with. If this view is correct of breeding downward, then all that the ewes exceed the bucks will be nearly or quite lost. If it is best for us in the United States to grow fine wool at all, we ought to be less fickle in our course. European breeders are wonderfully steady and persevering, and whole districts unite as to a particular standard. Witness the Devon cattle, the Southdown sheep, the Berkshire pigs, &c., &c.

John Brown,
of the firm of Perkins & Brown.

*Akron, Summit Co., Ohio, Feb.* 15, 1846.

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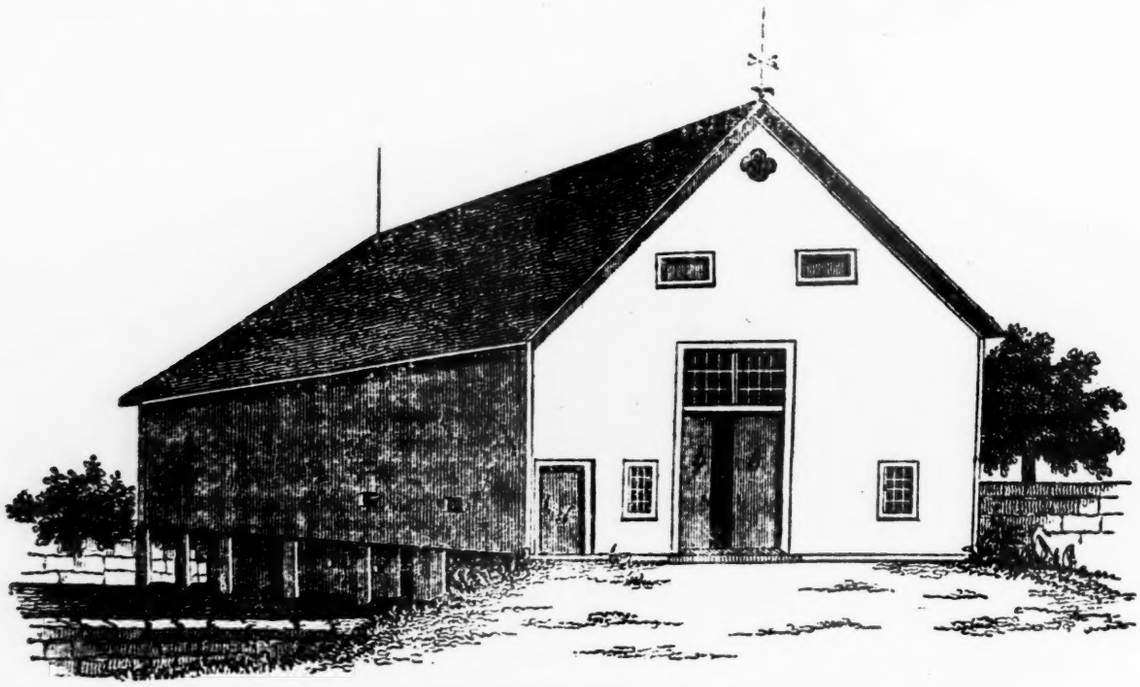
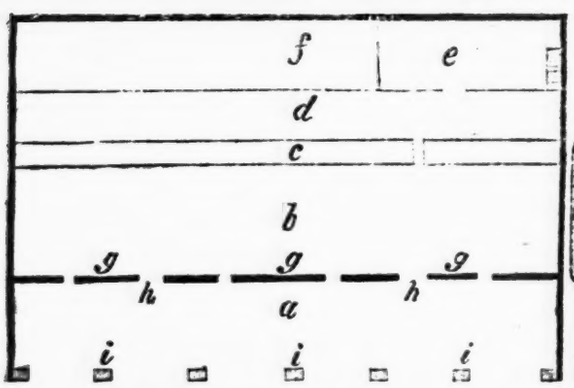
Raising Beet Seed.—Every year large quantities of beet seed are imported into this country to supply the demands of the farmers. Nothing is more easily grown. Set out choice roots in the spring, the same as for growing turnip or cabbage seed, and they will produce in abundance. For full particulars on this subject see Vol. 2, page 35. The only additional care requisite is, as the branches get large, set small stakes around them in a circle, and tie a cord from stake to stake for their support.

## A MASSACHUSETTS BARN

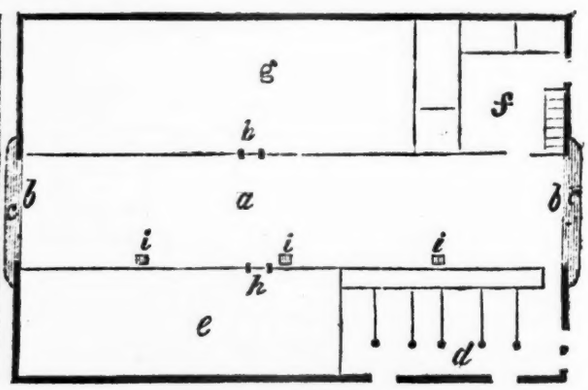
I HAVE been in nearly every State in the Union, and paid considerable attention to their agriculture, and especially the farm buildings; and, after all, I do not know anything in this line superior to the barns of my native State, Old Massachusetts, for the general purposes of the farmer As an admirable example of these, I subjoin a sketch and description of one built by Mr. Cyrus Knox, of Palmer. The ground on the front is on a level with the first story; back and to the side of this it descends, having an open shed, as shown on the left of the sketch, and a basement story



ELEVATION.—FIG. 34.




BASEMENT.—FIG. 35.




GROUND FLOOR.—FIG. 36.

*Description of Elevation.*—*b b*, Large doors, which open on to the barn floor.

*d*, Stable door.

The windows slide back and forth, for the purpose of ventilation when necessary.

*Description of Ground Floor.*—*a*, Barn floor, 12 feet by 60.

*b b*, Doors hung on iron rods and rollers over head, like the folding doors of the parlors of our modern houses in the cities, opening and closing with equal ease; made of 1¼ inch clean stuff, and battened on the outside with open battens, formed so as to give the doors the appearance of pannel work. The posts on each side of the doors are 14 inches wide, with a piece sawed out of the centre, through which the doors pass. The posts are framed into the sills with a double cock-tenon, to give strength.

*c c*, Stone door sills, 16 feet long by 18 inches wide, with a lip raised on the inside, against which the doors rest, and then slanting with a bevel outward.

*d*, Stable, 12 feet by 24, with fixtures for one pair working horses, and two yoke of oxen.

*e*, Bay, 8 feet high, until it rises above the stable, then it runs the whole length of the barn, 60 feet.

*f*, Store room, 16 feet square, with a flight of stairs leading into the cellar, 8 feet high.

*g*, Bay, 16 feet by 44, until it rises above the ceiling of the store room, then it goes the whole length of the barn, 60 feet.

*h h*, Upright posts framed into timbers above and

below, with rungs inserted for ladders, to ascend and descend at pleasure.

*i i i*, Narrow scuttle doors, through which the loam is passed down into the stable below, to cover the hardpan, over which the boards and plank are laid, as described in *b*, of the basement.

*Description of Basement.*—*a*, Open shed, facing east, 12 feet by 60.

*b*, Stable, with windows the whole length, hung with strong strap hinges to open and shut at pleasure; also a window at the south end. The object of so much window is, to throw out the manure, and to ventilate the stable, which is 12 feet by 60. The ground under the stable is a hardpan, over which is placed every summer a layer of loam 6 or 8 inches thick, and carefully levelled. On this, boards are laid lengthwise, some inches apart, and on these boards plank are laid cross-wise. Through the interstices of these the liquid manure runs down, and mixes with the loam, which is thrown out in the spring, and mixed with the manure under the shed, and fresh loam put in place of it, and the boards and plank replaced. This takes but a short time to do.

*c*, Manger, 3 feet wide, made with plank formed into timbers and pinned; not a nail about it, and perfectly tight. Stalls are divided off for two cows or oxen each, to be tied with ropes fastened at each outer corner.

*d*, Open space, 5 feet by 60 feet.

*e*, Cellar, 8 feet by 16, filled with roots in the fall, and supplied from the pits during winter as they are wanted.

*f*, Bay, 8 feet by 34, running up to the roof, 27 feet to the eaves.

*g g g*, A bank of loam the whole length of stable, except against the doors, which are guarded by a narrow plank fixture to keep the loam in its place, which is mixed in small quantities with the manure every morning as the stables are cleared.

*h h*, Stable doors.

*i i i*, Seven stone pillars 10 feet long, standing on flat stones 2 feet under ground, bolted to the sills of the upper story with iron bolts, made of 1½ inch round rods.

The barn stands upon a strong foundation of stone on the west side; both ends are laid in lime mortar, and well pointed with the same material. The top stones of this foundation are from 10 to 14 feet long, by about a foot square. At the south end, the walls jut out on each side of the barn doors, and the space is filled up with earth between, to make a gradual descent, and the egress easy for an empty cart or wagon to pass out into the adjoining meadow. The outside covering is of clear pine boards, well seasoned, planed, tongued, and grooved together, running up and down, painted, and the roof well shingled, and every part of the work done in the most substantial manner.

*Cost.*—The stone and timber being on Mr. K.'s own land, the whole cost of this barn did not exceed $600, the work of the owner reckoned at the usual rates he paid to other mechanics. The presumption, however, in my own mind is, that if he did not do the work of three men himself, he did and saved what was equivalent to it by personally superintending every stroke; by being up at the early dawn of day with teams all fed, yoked, and harnessed, and every man placed at his proper post the moment he came upon the ground. I make these observations that no one may be disappointed who shall undertake to build a similar barn, hire his builders, stone-cutters, masons, and carpenters, find them plenty of alcohol, while he sits at the neighboring tavern taking into his own stomach copious draughts of the good creature, talking politics, &c., &c., and finds on footing up all his bills that they amount to $1,200. Here is a building which, if kept properly covered and painted, will last a century or upwards.

The yard adjoining on the east, has a fountain of running water brought into it by pipes. A high wall supports the bank on the north side next to the road, which breaks off all northerly winds, and it is intended to be surrounded with sheds on all sides.

A TRAVELLER.

## BLIGHT IN PEAR TREES.

I HAVE been an attentive reader of your paper for three years, and have received much valuable information from it. You have only heard from me as I have forwarded my yearly subscription. At this time I thought I would offer some remarks on the blight in the pear tree, and under-draining of land, from personal observation.

In vol. 3, page 321, your correspondent has expressed his opinion that the blight is a disease of the bark, and not of the wood in the pear tree, and that the remedy is found in cutting off the bark, and washing with strong ley from wood ashes. I am convinced that his theory is correct, for the following reasons:

About twenty years since, I came to this place and located myself as a farmer. At the time, there was a nursery of young pear trees in the neighborhood, which was soon divided among the lovers of good fruit: these trees have mostly been destroyed by the blight. Some were planted on a farm which I have since purchased. When I came into the occupancy of it, there was one so large that I did not think best to remove it for fear of destroying the tree; the other was removed and planted in a very different soil. The tree that remained soon showed signs of blight. I went and cut off the limbs which were affected. The next season, directly after it had put forth its foliage, the disease made its appearance again. I now resolved to cut the diseased part of the tree away at all events. I commenced with cutting as I supposed low enough; but cutting the same limb several times, I found the bark defective in most instances. The bark on the flourishing limbs was apparently healthy; but, on examining the bark on the body of the tree, I found it entirely dead; there was not a green spot in going round the tree, for I took the entire bark off about six inches in width, and yet that tree produced a good harvest of fruit; one of the pears weighed 20 oz. The tree never leafed again, but sprouted from the root.

Now the examination of the above case was satisfactory evidence to me that the diseased part of the tree was the bark, and not the wood; but for the remedy I am indebted to your correspondent above alluded to. Although I have not been troubled with the disease since—perhaps from the fact that I have occasionally washed my trees with the remedy

proposed; but I do not attribute it to that altogether. It is my opinion that the pear flourishes best in a moist soil. What has led me to the conclusion is this; the trees which I first planted from the nursery above mentioned, were planted in a soil mostly composed of loam and water, found in digging from 6 to 8 feet deep, while the tree I have just described was on a soil composed of sand intermixed with gravel, to the depth of certainly 12 feet, as found by digging—how much deeper it ran I know not. It has been a matter worthy of observation to me, that, almost invariably, the trees on the driest land have been destroyed. One of my neighbors has quite a number of trees which are planted on loam underlaid with clay. These have suffered much from the disease. He is making vigorous efforts to restore them, by pruning and digging a trench in circular form, about 4 feet from the trunk of the tree, and, during the heat of summer, filling it with water daily. Whether he succeeds or not, is yet to be known.

Doctor W, —— of this place, who has taken some pains and been at some trouble to procure a choice selection of the best kinds of fruits, observed to me that his pears were going to be destroyed by the blight, and wanted to know if I had seen any proposed remedy which I considered efficacious. I then related the method as proposed by your correspondent as above alluded to, in connection with my own observation on the subject, and gave it as my opinion that it would restore the trees to health and vigor. He concurred in the opinion, and last spring cut off the affected limbs, shaved off the bark, washed with the ley, and is of the opinion that he has restored his trees. This summer will probably decide the experiment.

I have found this article so long that I shall omit saying anything on the subject of under-draining till another time. L. W. HITCHCOCK.

*Tallmadge, Summit Co, Ohio, Feb.* 20, 1846.

## GARDENING.—No. 2.

HAVING thus very briefly contemplated the progress of this art, from its introduction to the present time, allow me here, to give a few short sketches of gardens, garden-like cemeteries, and public walks, in various parts of the world, and at various times of their history.

The most celebrated gardens in very ancient times were those of the kings of Assyria and Babylon. The form of these gardens was square; and, according to Diodorus and Strabo, each side was four hundred feet in length. They were made to rise with terraces, in the form of steps. They were in the vicinity of the river Euphrates, from which they were supplied with water. These terraces contained fountains, parterres, seats, and banqueting rooms, with an almost endless variety of fruit, flowers, and plants of ornament; it was in fact a combination of all the splendor and luxury of Eastern magnificence, with the simple pleasures of beautiful and verdant nature. So surprising and laborious was this undertaking, that the ancients classed it with the various "Wonders of the World."

Many gardens belonging to Jewish princes and subjects are mentioned in Holy Writ. The principal one was King Solomon's, the form of which was quadrangular and surrounded by a high wall. Solomon says: "I made me gardens and paradises, and I planted in them all kinds of fruit trees. I made me pools of water, to water with them the groves flourishing with trees." (*Eccles.* ii. 5.)

The cemeteries of the Jews may be considered as a species of garden. We find that Abraham buried Sarah in a field "bordered with trees." The sepulchre of Jesus was in a garden; and from various other data it is clear, that with all who could afford it among the Jews, the place of burial was not only sacred, from its use, but interesting or beautiful from being accompanied by some striking or agreeable natural feature.

The grove of Orontes is thus described by Gibbon, in his Decline and Fall of the Roman Empire. "It was composed of laurels and cypress, which formed in the most sultry summers a cool and impenetrable shade. A thousand streams of the purest water issuing from every hill, preserved the verdure of the earth, and the temperature of the air; the senses were gratified with harmonious sounds and aromatic odors; and the peaceful grove was consecrated to health and joy, to luxury and love."

An account of the gardens of the Emperor Nero is thus given by Tacitus in his Annals. "Moreover Nero turned the ruins of his country to his private advantage, and built a house, the ornaments of which were, not miracles of gems and gold, now usual in vulgar luxuries, but lawns and lakes, and after the manner of a desert; here groves, and there open spaces and prospects; the masters and centurions being Severus and Celer, whose genius and boldness could attempt by art what nature had denied, and deceive with princely force."

In Lombardy, the gardens of Monza and of the Isola Bella are the most noted.

In speaking of the Isola Bella, Wilson says: "Nothing can be so noble as the conversion of a barren rock, without an inch of earth on its surface, into a palace of fertility and luxury. This rock in 1640 produced nothing but mosses and lichens: when Vitaliano Borromeo conceived the idea of turning it into a garden of fruits and flowers. For this purpose, he brought earth from the banks of the lake, and built ten terraces on arches, one above the other, to the top of the island on which the palace is placed. This labor has produced a most singular pyramid of exotics and other plants, which make a fine show, and constitute the chief ornament of this miracle of artificial beauty." All travellers do not, however, agree with Wilson in the above description; for Hazlitt remarks, that he was "utterly disappointed in the Borromean Isles. Isola Bella resembles a pyramid of sweetmeats ornamented with green festoons and flowers."

"Extensive gardens of pots and boxes are common on the roofs of the palaces and other houses in Naples. Viewed from the streets they have a singular effect; and, retaining their beauty and fragrance from the fresh breezes in these elevated regions, and the comparative absence of that stench with which the lower atmosphere of Naples is almost continually charged, they are very agreeable to the possessors." (*Loudon.*)

M. Seterveldt's garden, near Utrecht, is a carefully preserved specimen of the Ancient Dutch style of villa gardens. Here the grand divisions of the garden are made by tall, thick hedges of beech,

hornbeam, and oak, and the lesser by yew and box. There are avenue walks and berçeau walks, verdant houses, rustic seats, canals, ponds, grottoes, statues, and other devices; and everything has its exact counterpart, and the often quoted couplet of Pope, "Grove nods at grove," &c., is nowhere better exemplified.

The gardens round Rotterdam are generally many feet below the level of the canal. On the Cingle, a public road which surrounds the city, are a continued series of garden-houses, nearly a mile in extent; these miniature villas being separated from each other only by wooden partitions, which are generally neatly painted "To these the citizens with their wives retire on Sunday, to smoke and take coffee." (*Neill.*)

Notices of gardens in France previous to the 16th century, are rare; but at the end of this century, Francis I. built the palace of Fontainbleau, and introduced there some traits of the Italian gardening.

In the beginning of the 17th century, Hirschfeld observes, that the gardens of France consisted only of a few trees and flowers, some plots of turf and pieces of water; and the whole totally devoid of taste, and completely wild and neglected.

The gardens of Versailles, the grand effort of Le Nôtre, and the model of excellence in the geometric school, are thus noticed by different writers. "Not as models of taste, but as models of a particular class or character of gardening." (*Hirschfeld.*) "The sum of everything that has been done in gardening." (*Bradley.*) "When I reflect on Versailles only, and what I have seen there, I cannot but think that I had a foretaste of Paradise: all my senses were struck with astonishment; and though I have the whole represented in fine prints, it is only a shadow of what was so naturally figured there." (*G. A. Agricola.*) "Such symmetry is not for solitude." (*Lord Byron.*)

The gardens of St. Cloud are less celebrated than those of Versailles, but at the present day are considered more beautiful. At St. Cloud, nature and art are struggling for the mastery; whereas, at Versailles, art is everything. "The fountain at St. Cloud, which is called the *Grand Jet*, from its amazing elevation, and from its delightfully retired situation, is one of the most beautiful of the kind in Europe. It is formed of a single *jet*, which shoots up from the centre of a quadrangular reservoir, to the height of one hundred feet. The gardens of St. Cloud abound in fountains; but this simple *jet* cannot fail to be preferred before all the fantastical designs of the grand cascade." (*Batty.*)

There are numerous small town-gardens in Paris, and many houses, as in Italy, have gardens of pots on their roofs. The public gardens and promenades of France are very numerous, and well arranged. The mildness of the climate makes the people enjoy passing much of their time in the open air, and their social disposition inclines them to congregate together. Public gardens and promenades thus become necessary appendages to every town in France.

Garden cemeteries are not uncommon in France, the most celebrated of which is called the Cemetery of *Père la Chaise*. It contains about 70 acres of land, and was originally owned by a Jesuit, named Père la Chaise, who was the confessor of Louis XIV., and from whom the cemetery takes its name. It was first used as a burial-place in the year 1804; between that time and 1832, it is said that nearly 30,000 monuments have been erected in it.

In Granville's Travels in Russia, we find the following: "The Strelna road lies to the north of the capital; and an uninterrupted line of sumptuous palaces, built in every variety of chaste, fanciful, and imitative architecture, flanks the right side of it; while, on the left, fields, with many clumps of trees and brushwood, separate it from the gulf. Most of the country residences belonging to the nobility and gentry of St. Petersburgh, have gardens and pleasure grounds in front of and around them. In front of the gardens, and immediately on the border of the road, a lofty post bears inscribed on a small square board the name and rank of the proprietors."

In general, extent, exotics, and magnificent artificial decorations, are more the objects of gardening in Russia, than scenes merely of picturesque beauty. This is accounted for, partly from the general want of refinement of taste in that country, and partly from its inaptitude for the natural style. The nobles of Russia, rendered aware of being distanced in point of civilisation by those of most other European countries, are resolved not only to imitate, but even to surpass them in the display of wealth. The most obvious marks of distinction, in refined countries, are necessarily first singled out by rude and ambitious minds, and large magnificent houses and gardens are desired, rather than comfortable and elegant apartments, and beautiful or picturesque scenes; since, as every one knows, it is much more easy to display riches than to possess taste; to strike by what is grand, than to charm by what is beautiful.

The first private botanic garden in Russia was that of General Demidof, begun during Peter the Great's reign. In order to fill this garden, two botanists were sent to travel over the whole of Asiatic Russia. "One single anecdote will prove how eager Demidof was to enrich his garden. Being at Rome in 1773, he found in the garden of the Petits Augustins del Corso, the handsomest orange tree he had ever seen. The monks did not wish to part with it, and he was obliged to employ a great deal of money and influence to overcome their scruples. Having succeeded, he caused the tree, which was planted in the open air, to be taken up with an immense ball, put in a large box, set on a carriage made on purpose, and transported to Moscow." (*Deleuze.*)

In Spain, horticulture, although now practised with very little attention to art, is of the highest antiquity. The study of plants was introduced into Spain and Portugal by the Arabs; and there was a considerable collection of plants at Seville early in the 11th century. The succeeding seven centuries present a blank, and the taste shown for botany in Spain and Portugal declined with the sciences; and that country where they had been cultivated, when the rest of Europe was in a state of barbarism, appeared to sink into apathy, after having shone with the greatest splendor under Charles the Fifth of Spain and Emanuel of Portugal.

The oldest garden in Spain is said to be that of the Moorish palace of Alcazar, near Seville. "The

outside of the Alcazar is miserable in its appearance; but the first court after entering the gate has a very grand effect. The courts are ornamented with marble fountains, and are well shaded with corridors, supported by marble pillars. The garden is said to have been laid out by the Moors, and is preserved in its original state. It contains walks paved with marble, and parterres laid out with evergreens and shaded with orange trees. In many parts of it there are baths, supplied by marble fountains from an aqueduct, and there is a contrivance for rendering the walks one continued fountain, by forcing up small streams of water from minute pipes, in the joinings of the slabs, which, in this climate, produces a most grateful effect." (*Jacob.*)

"El Retiro, the seat of Count Villalcazar, lies a few miles from Malaga, and was formerly a royal residence. The gardens are laid out in the Moorish style, with straight cypress walks. They are remarkable for the lakes, fountains, and beautiful water-works which they contain, the curious shapes into which the trees and shrubs are cut, and the great variety of flowers cultivated." (*Loudon.*)

L. T. TALBOT.

## FAT HEIFERS.

IN February last, Mr. Clift showed and sold in New York two very superior fat heifers; one was four and-a-half years old, weighing 1,670 lbs. live weight; the other, three years old, coming four, weighing 1,610 lbs. The oldest was bred by Mr. Clift; the other, and the better, was bred in Western New York. Both were *high grade* Short-Horns. Their quarters alone weighed nearly 2,000 lbs. They did great credit to Mr. Clift's feeding. Their *dead proof* was admirable, as their *living handling* indicated. The following is Mr. C.'s statement of their feeding.

*Carmel, Putnam Co., N.Y.*

My method of feeding these heifers was as follows: They were both in what we call good strong flesh to begin with, when turned out to pasture last spring; they had previously, for about one week, four quarts of cob and corn meal a day each. After running the usual time at grass, or it may be a little earlier, on account of the drought which prevailed throughout the season, I commenced to give them a sheaf of oats each, and a feed of green corn daily; this was continued until the time of green corn was over; this was followed by only one feed of meal per day, oats and corn, and sometimes buckwheat, mixed in about equal quantities, and never to exceed eight quarts to each heifer, a day. This, it may be said, was pretty light feeding as respects grain, and especially in an attempt to make very fat or extra animals.

But what I conceive to have been the greatest aid or benefit in the laying on the flesh of these heifers was, that during the time they were on hay, they were well protected by shelter, and had clean litter, and the privilege at all times of going to a mow of the choicest fine sheep hay, such as I cut on my old upland meadows early in the month of June, and had put up as green as possible.

I could write a longa rticle on the great importance of having the proper grass, and making out of it the right sort of hay, for the fattening of sheep and cattle, and for cows giving milk, &c. Every observing farmer ought to know at least, that for such stock, in order to have them do well and make a profitable return in any given time, their hay should be of a superior quality, and such as they will eat readily. Doubtless, in all profitable feeding of sheep and cattle, for the shambles, some kind of grain and roots should be fed *regularly* and *daily*. But all the grain given them, with *hay* that they will not eat with good appetite, will fall far short of making them what they may be made, in feeding less grain and the right sort of hay. Another thing is, as they advance in flesh and fatness, the more delicate and dainty are they in the choice of food, and the more clean should be what is given to them. It is true that I obtained less for the heifers in market than I had anticipated, viz., only $190, or about $9.50 cts. per cwt. Their live weight was 1,670 and 1,610 lbs., and the butcher who slaughtered them, informed me, that their quarters weighed 1,988 lbs.

L. D. CLIFT.

## EXPERIMENTS WITH GUANO.

As the time approaches to determine what manures shall be used for spring crops, I take the liberty of sending you what I know of the effects of guano the past season. It is little to be sure; but as I feel much better satisfied of its value than before this experience, perhaps it may have the same effect upon others. At least one-half of the experiments I have seen tried have failed, and the experimenters heartily discouraged and frightened from further use of it; not by any fault of the manure, but from want of care in using it.

The most favorable results, as yet, have been with wheat, applied both at the time of sowing and in spring. In most cases it has been sown broadcast, in a pure state, without being mixed, and consequently liable to great loss by evaporation, unless the soil by chance contained something capable of retaining the gases. I presume in this way its effect will not be seen for more than one or two crops, and will give rise to the opinion that it will not last.

Experiments on corn have not done as well. In some cases, half a gill has been thrown on the crop, and but slightly mixed by the planter, the corn carelessly dropped and covered; there most of it lies still, for aught I know: one thing is certain, not more than half of it has yet made its appearance above ground. In other instances, it has been mixed with rich earth, or coal ashes, just before using, in proportion of two or three times its bulk, amounting to about the same thing as not being mixed at all, so far as preventing the grain from germinating is concerned; these all shared the same fate as the first. No one complains of its effect on what did get above ground; in fact it is admitted to do good above most manures of the same value; but then for this crop it is considered a kind of kill or cure medicine, which they are not over anxious to try except in desperate cases. I do not know one instance in which the application has been made in a way to receive the full benefit of its action, not excepting the small experiments made by myself.

I bought a few hundred pounds last spring without much faith, and with small hope of getting my money back, which was rather lessened than increased by the tough stories I had read of its aston-

ishing effects: it seemed to require something in addition to its own merits to make it sell. You may suppose, and it is the case, that, under the circumstances, I was not over particular in using it.

On the 1st of April I mixed a quantity with damp coal ashes, which immediately caused such an escape of gas as my eyes and nose never before met with from manure (*a*). This began to give me a better opinion of my guano, and although I was well aware some of the best of it was fast departing, I felt glad of it, for it was some satisfaction to know from experience that it was formed of such material. I immediately spread some of the mixture over a piece of winter wheat, on the poorest gravelly hill in the field, at the rate of 180 pounds of guano to the acre. I thought if it would show itself there, it would anywhere. For grass it was used in the same way. For corn, mixed the same, and put in the hills, at the rate of 300 lbs. guano per acre.

As the experiments were not commenced with a view to test its value minutely, none of the crops were measured; but from a careful examination at harvest, I think the wheat was increased *one-half*, and the straw lengthened some six or eight inches, over that adjoining on the same kind of soil. The heads were well filled, indicating heavy weight of grain; whilst their neighbors stood erect as if waiting for a further supply. The increased growth of the grass was very perceptible in ten days after the application, and the crop of hay increased at least *one-third*.

The corn, although not more than two-thirds of it came up, was better than any adjoining, treated with same value of poudrette, ashes, and sugar-house dirt, all of which, from previous experience, I hold in high estimation. On some rows near I tried some urine, which has surpassed either of the others; but as I did not know its cost, could not ascertain its comparative value. I obtained enough for an acre in return for a little work and an outlay of 50 cents; and plenty of it may be had on most farms at the same rate.

I do not anticipate lasting effects from these applications of guano, from its not being properly mixed before sowing, and then used as a top-dressing (except on corn) on a loose soil, with everything to facilitate the speedy evaporation of its soluble parts, and little to prevent it; it would be singular if it proved beneficial for a longer time. I gave half a handful to some hills of corn when they were about 18 inches high, but saw no effect.

To sum all up, I have no doubt of its importance as a manure, more valuable than any in general use, requiring only a few judicious applications to bring it into the good graces of even old-fashioned farmers We look to you as head master for directions (*b*). Issue the order, we will obey, only don't talk about too small quantities, we are not accustomed to that in this land of moss bankers and muscles. D. K. Y.

*Syopeth* (late Oyster Bay), *Long Island.*

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(*a*) By reference to our March number, page 76, line 22, and on, our correspondent will see that by mixing ashes or lime with guano, it rapidly expels the ammonia, the most valuable part of it. It was this which so affected his "eyes and nose" as he speaks of above.

(*b*) Our correspondent had not our last number when he wrote the above article. In that he will find the requisite directions.

## POLLED CATTLE.

I MUST ask the favor of you, to look out at your leisure, for the polled dairy cattle for me. It is not desirable that they be large. My own observation satisfies me that large breeds usually are not as rich and copious milkers in proportion to size, as small breeds. An inquiry in your paper might lead to the discovery of the desired stock. Color is also unimportant, though red or roan is preferred. Whether foreign, grade, or native, is immaterial. The only requisites are to be *polled*, with *high dairy qualifications*, and good form and constitution.

We have a good many polled cattle in this region, usually small, some of which are called *here* good milkers. I have three of them, which, if fat, would weigh only about 450 nett—that is, 112½ per quarter. In the height of the milking season, upon clover pasture, they will yield each 16 to 20 quarts daily. Is this good milking in proportion to size? [Yes; very good indeed. ED.] How does it compare with your best dairy stock at the North, not forgetting their small size? [The comparison is highly favorable to the South; we have few such good animals at the North, we regret to say.] From such material as these three cows, can I reasonably hope to breed a tribe of polled cattle valuable for dairy purposes? [Yes; if put to a bull bred from a good milking strain.] Your answers fully, and in detail, to these interrogatories, will materially oblige me. It is very important, as you know, to start in breeding with the right sort of stock. G. W. J.

*Milton, N.C., Feb.*, 1846.

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Can any of our readers inform us where we can procure polled cows, which are not only themselves good milkers, but have been bred from milking ancestors? We would also like a bull or two at a moderate price. We were always greatly in favor of polled cattle, as the horn is of very little use. It consumes considerable food to make it grow, and keep up its waste. Besides, horned cattle are dangerous to themselves and to men. They cannot be packed in yarding, in stable, or in transportation, as close as the polled cattle, nor are they so easily handled in any position. Why, then, should we cultivate the horn? Some contend that a horned animal is the handsomest. Why, we know not. To our taste *utility is beauty* in growing the domestic animals. If we were keeping sheep, we would soon have a flock of Saxons and Merinos without horns.

But to cattle again. How long and how often must we ask the farmers of this country to pay more attention to the dairy qualities of their cows? How few, in breeding, ever regard this point, or indeed *any point at all!* Pray do awake to your interests, and take some pains in this matter. When asked to purchase good milking cows (which we frequently are), we scarcely know where to look for them, except among the high-priced Durhams. This is disgraceful to the country, and shows an apathy in breeding good milkers, among the great body of our farmers, which is really astonishing.

## TO KEEP NEW LANDS IN GRASS.

As I have spent the best of my days in the woods, this is the first time I have attempted to write. You will not expect much of me; but as others have had something to say of their country in your columns, why not I? The people of Western Pennsylvania are very much engaged in the business of lumbering. Our forests present a formidable growth, some of the pine trees of which are from 4 to 5 feet in diameter, and from 120 to 150 feet high—some declare there are individual trees 200 feet high. These are intermixed with a sturdy growth of beech and maple, and most other kinds of timber peculiar to our country—consequently, there is chopping and logging for boys to do here before they can go to farming. And that is not all, there are some stumps and roots in the way after this; but sometimes we get good crops of potatoes, corn, wheat, and oats, and we sometimes get good grass; and we want to know what is the best way to keep those grasses in, for they frequently run out before the stumps and roots get sufficiently rotted so that we can break up with the plow to advantage (*a*). What are the best manures we can get here, seeing lime is high, and a considerable distance off to haul it; and plaster the same, only $7 to $10 per ton; and your guano and poudrette are still farther off (*b*). Our soil is generally a sandy loam—in some places a gravelly loam.

I should like to keep my farm in grass as much as I could at present, and clear for grain every year, as my stock increases faster than my pastures and meadows. I should like to have some of your choice implements and farming tools here to try experiments with; also some of your Merino sheep and Short-horned cattle, to draw logs with, and see if they would outdraw my Bakewell steers; and, finally, Mr. Editor, please to give us all the information you can how to manage our farms and stock in this new country. A YOUNG FARMER.

(*a*) We have had considerable experience in clearing and cropping forest lands, and the best method we found to keep in the grass was, as soon as it began to run out, to let the first growth of the season go to seed, and when the seed was ripe, roll down the grass with a roller. The second growth also should not be disturbed, and if any bare spots show themselves in the month of August, or the following spring, harrow them, then sow grass seed and roll. The *fog* or dead grass would be rather in the way of mowing the next year, we therefore should prefer pasturing it, and mowing the succeeding years. By this system the land lies idle one year; but this gives it an excellent opportunity to re-seed and manure itself; and considering the low price of land in all new countries, it is the best and cheapest plan we know of. Another method is, to harrow the bare places the moment the frost is sufficiently out of the ground to do so in the spring, sow grass seed plentifully upon them, then sow plaster over the whole field at the rate of three bushels per acre, and as soon as the grass gets up to a good bite, turn the cattle upon it, and keep them there the whole season. In the fall of the year go over the field with dung beetles and beat the droppings of the cattle fine, and in doing so, distribute them as evenly as possible. Follow this course two years, and the meadows will usually produce good crops of hay again.

(*b*) Ashes are usually cheap in a new country, and these, whether leached or unleached, should be carefully saved and applied broadcast upon the land, at the rate of 20 to 30 bushels per acre. There is no better top-dressing for grass lands. Lime or plaster may be applied when cheap. As to other manures, they are usually too costly to think of in a new country.

For further particulars on the subject of cultivating newly cleared lands, we refer our correspondent to Vol. 3 of the Agriculturist, pages 3 and 174.

## HOOD'S BALANCE GATE.

THE inventor of this gate having felt the inconvenience and danger connected with the ordinary road gates, arising from the necessity of getting out of the carriage and leaving the horses, to open the gate, and again, after leading them through, being obliged to return and shut it, thereby exposing his vehicle to be run away with, gave his mind to the subject, and the result was the plan of the above gate, which he now submits to those interested, and as entirely adapted to obviate this danger and trouble; besides, being a complete protection against the inroads of cattle, as it will be seen, by examining the principle, that a carriage cannot pass through without leaving it closed. The gate has been in use now for twelve months; never been out of order, and on no occasion has it failed to answer the purpose intended; and it can be made very ornamental as well as useful.

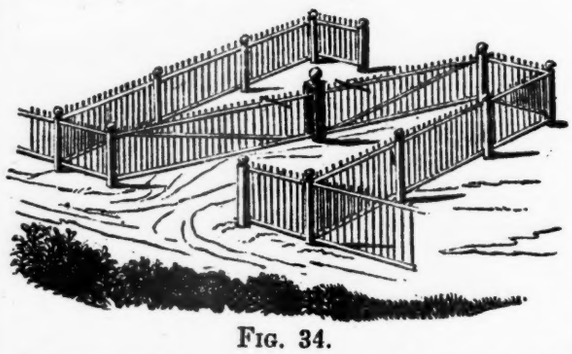


FIG. 34.

The gate is hung on a centre, and surrounded by a fence as represented by the drawing, and may be either square or oval, according to fancy, with two openings of the ordinary width, with posts furnished with catches, to receive the latches at the end of the gate; these latches are moved by either of the handles placed on the top-rail of the gate, about 4 feet from the centre post.

It will be observed on reference to the sketch, that the gate is always open for the admission of carriages, for ingress or egress. The driver comes up to the handles farthest from the opening he entered by, he unfastens the latches, and, by a slight push, he sends the gate to the opposite post, when, by the impetus given to it, it fastens itself, and he then can drive on without moving from his seat.

A model can be seen at the Agricultural Warehouse of A. B. Allen, No. 187 Water Street, and inquiries answered.

The gate is always to be seen at the entrance to the farm of the inventor, ANDREW HOOD
*Westfield, Staten Island, N.Y.*

# Ladies' Department.

## THE GARDEN.—No. 2.

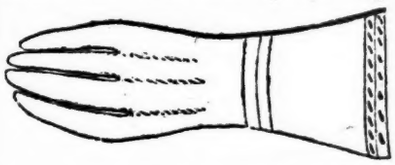
Now up and away, country lassies, fair and brown; wrap your shawls about you, and we will soon find out what is to be got ready for our summer campaign. First, we will loosen the wrappers about the tender shrubs; stir the top-dressing of the borders; rake the grass plots, and the leaves that have gathered under the bushes, and then all will look neat and ready for the next warm rain. The seed-box must be inspected, and supplied with such as failed of the last year's crop; the labels must be taken out, and rewritten; the props and small ladders for everlasting pea and other shoot vines must be neatly re-painted—of *course* they were *mended* last autumn, and put carefully away—it is rather too late to have new ones made now, when one is almost ready to use them. Among the first spring work in the garden, the last trimming should now be done, as shrubs are liable to be much injured, or even killed, by being trimmed when the sap is in full flow, and the leaf buds expanded.

As I shall have very little to say about gardening for some months, I must not omit here to warn the ladies of one plague which will mar the beauty of their choicest plants, unless timely care be taken to prevent it. I mean the snails, or slugs, as they are more properly called, which are so destructive to vegetation, that I have known in a wet season, when more numerous than usual, every plant in the garden defaced by them, and scarcely a leaf escaped their ravages. But however disagreeable it may be to have one's flowers devoured so unceremoniously, it is a mere trifle compared to the horror of the risk one runs of *eating* the depredators boiled in the spinage, or turning up a fine fat one on the lettuce, while dressing it at dinner. Bah! the very thought is enough to make one eschew vegetable food for the rest of the season. Yet I have seen both happen at a well-ordered table! The war should begin in the autumn, and every snail be destroyed as soon as found; they then congregate in numbers just below the surface of the ground, around posts, trees, and shrubs, as well as under flower pots; in short, wherever they can find a secure, damp lodging for the winter. If they are cleared well from these hiding-places, and killed, they will hardly become so numerous as to be very troublesome the next season.

Every one must have noticed, when at work in the spring, little clusters of bluish-white globules, almost transparent, under the little clods of earth on the beds and borders; these are the eggs, which are deposited in April and May, and are easily destroyed, if thrown out where the sun will shine upon them.

An excellent way to capture those that have escaped the vigilant eye of the gardener in the early part of the season is, to spread cabbage, or any other thick leaves, about the plant you wish to protect, and examine them while the dew is on in the morning—for even snail-hunting requires early rising. They will be covered with them. Dip the leaves in water, and the snails will fall instantly to the bottom; but as they do not easily drown, care must be taken not to throw the water on the ground, nor let it stand unnoticed too long, or they will crawl away, and go to work again as merrily as ever! Another method, equally effective, and much more convenient, as it will entrap them during the day—but stop—I must not go quite so fast—my fair friends will pardon me for keeping this a profound secret, lest I should be suspected of doing anything to encourage lazy habits, after all the homilies I have written upon the advantages of early rising.

A lady's dress should always be adapted to her employment, and is of more importance in the garden than she perhaps is aware of. The material must be strong, or it will be rent to tatters in the shrubbery; plain in color, or it will too soon show dirt; without trimming, and short, or it will always be in the way, and look untidy. Summer winds are hard upon the complexion, therefore, her neck and throat will be covered by the deep cape of her garden bonnet; and if she will try the advantages of thick, wash leather gloves, with a broad stiff cuff to protect the hands and wrists from the sun and briars, she will wonder how she ever did without them.



Garden Glove.—Fig. 38.

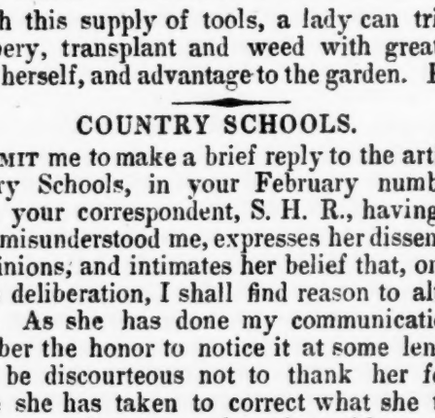
Her shoes—shall I give a drawing of one of them also? Dear Mr. Editor—it must come out—but I tremble for the effect of my next paragraph—how *can* I recommend gum elastic shoes to young ladies, who perhaps pride themselves upon being like her whose

> ——" feet beneath her petticoats,
> Like little mice stole in and out,
> As if they feared the light."

" Little mice," indeed! Why, a lady's feet, cased in high gum shoes, are as ugly as black puddings, or young walruses; and, as to fearing the light, they seem to have such an undue sense of their own importance, that it is almost impossible to hide them. I believe the least said upon this ugly subject is best; but if the girls have not discretion enough to wear them, they had better give up working before breakfast; which is the only time I can, with a safe conscience, advise them to devote to it.

She must also have her own tools, and attend to them herself; always rub, clean, and put them in their own place, as soon as she has done with them. A lady's spade should be about half the usual width, with a handle as light as is consistent with strength; two trowels, of different sizes, with the sides sharp and turned inwards, so as to take up small plants without disturbing the earth about the roots; a small iron rake; a hoe; a pruning knife; a pair of scissors, so contrived, as to hold the flower after it has been severed from the stem; and a basket to receive the weeds as fast as they are pulled up. In addition to these, which are absolutely indispensable, she ought to have a small light wheelbarrow, with long handles, curving upwards, which, by throwing the weight principally upon the wheel, is moved with much more facility than those with long, straight handles; does not strain the shoulders so much, and is better suited to a woman's dress, as she is not obliged to bend the body

so much forward, which throws the skirt upon the ground, and puts her every moment in danger of being *tripped up*, and having her *nose broken*.



LADIES' WHEELBARROW.—FIG. 39.

With this supply of tools, a lady can trim her shrubbery, transplant and weed with great comfort to herself, and advantage to the garden. E. S.

## COUNTRY SCHOOLS.

PERMIT me to make a brief reply to the article on Country Schools, in your February number, in which your correspondent, S. H. R., having, as I think, misunderstood me, expresses her dissent from my opinions, and intimates her belief that, on more mature deliberation, I shall find reason to alter my views. As she has done my communication for December the honor to notice it at some length, it would be discourteous not to thank her for the trouble she has taken to correct what she thinks my errors; and to assure her, that without changing my opinions as there expressed, I agree entirely with her on most points of this very important subject. I would, however, request her to re-peruse my remarks, and I think she will then see that, instead of differing so widely as she at present apprehends, we are occupying the same ground, on which she proposes to take a step in advance of me in ascending the hill of science.

I spoke of the *present general* incompetency of the teachers of our public schools, and the consequent necessity for private instruction; while your fair correspondent, with commendable *esprit de corps*, proposes that a prior step be taken, by "increasing the number of those who are now obtaining, in the Normal Schools," the desired requisites for teachers. This, at least tacitly, admits the truth of my position, that all our schools are *not yet* supplied with well educated teachers, and hence the necessity for increasing the number of students who are candidates for the office—in this I agree entirely with S. H. R.; and moreover, as I have great confidence in the wisdom and ability of my New York and Eastern neighbors, I am willing to have all the aspirants educated in the schools she so warmly recommends, until we, lazy Southrons, shall have public spirit enough to establish such for ourselves.

I would have the number of good schools, private and public, increased until every child in the country should have the opportunity of learning everything which can make him or her shine in the sphere of life in which he or she is placed; for, in exact proportion to the increase of *good* schools, will be the value placed by the community upon education; and when we shall have four times the present number, all supplied with competent and conscientious teachers, then, but not till then, I shall think the necessity for private instruction *materially* lessened.

Again, I spoke of the *general* unwillingness of farmers to pay schoolmasters. S. H. R. thinks that those who are qualified for the task should "receive an adequate compensation." Certainly they ought to be amply paid for imparting the knowledge they have acquired; but first, we must try to remove the stumbling-block, and make these farmers willing to open their purses. For this evil, my ingenuity can devise no remedy which would not be worse than the disease.

I honestly trust her fears are groundless, that "the irresistible effect" of the adoption of my plan "would be effectually to destroy the public schools," as I believe there are comparatively very few parents who would withdraw their children from the care of such teachers as S H. R. predicts "every district school in the State" will at no distant time be supplied with—"thoroughly impressed with the responsible duties of their station—intellectually and morally prepared for their discharge—and capable of training the expanding minds of our youth in every department of science, from the lowest to the highest."

I, however, retain my belief, that all the combined advantages of a public course of instruction cannot compensate for the evils which must result to the pure minds of children, from the daily contact with numbers—and therefore, *for girls especially*, I still advise maternal care, and under parental inspection, a good governess. S. H. R. will also find that I did not allude to *wealthy* parents, when I recommended a union of two or three families to employ and pay a private teacher. Those of my friends who have made the experiment most successfully, are neither able to give their children an expensive education, nor have they the time to spare from the never-ending duties of plain farmers' wives, to attend as they fain would do, to the instruction of their little ones.

I cordially thank S. H. R., for her invitation to visit the Normal School of which she speaks so highly, but, alas! my crest is a snail in its shell, with the motto, "I cannot leave home." I have therefore little hope of being at liberty to indulge in such an excursive pleasure, as such a visit would afford me; but as I am, with characteristic haste, maturing a plan for casting my shell, and *creeping** to the Falls of St. Anthony, exploring the Mammoth Cave, and perhaps taking some views from nature among the Rocky Mountains, I do not despair of being able so to arrange it, that I may find Albany in my route thither, or on my return. E. S.

*Eutawah*

TO TAKE THE SMELL OF PAINT FROM ROOMS.—Let three or four broad tubs, each containing about eight gallons of water, and one ounce of vitriolic acid, be placed in the new painted room, near the wainscot; this water will absorb and retain the effluvia from the paint in three days, but the water should be renewed each day during that time.

* Aye, *when* I *go*, I mean to *creep*, for, truly, I love not railroads, except through an often-travelled country—one might as well mount upon the wings of the wind, to fly with the next flock of wild geese or passenger pigeons, and take "a bird's eye view" of the wonders of nature and art, as to whirl over the ground behind a huge cauldron of boiling water!

## FOREIGN AGRICULTURAL NEWS.

By the steam ship Hibernia, we are in receipt of our foreign journals up to March 4th.

MARKETS.—*Ashes* were neglected. *Cotton* quite firm, with a speculative feeling; some fluctuations during February and March, but it had settled down to about the same rates as ruled per our last. *Flour* dull. *Beef* an improved demand. *Pork* in little request. *Lard* has fallen. *Cheese* little doing. *Guano* advancing and in good demand. *Naval stores* in moderate request. *Rice* much wanted. *Seeds* have advanced. *Tobacco* steady. *Wool* the same.

*Money.*—The rate of interest had slightly declined since our last, and the money market was considered easier.

*The Weather* was very mild throughout February, so much so as to push the wheat forward and endanger its being injured by March frosts, should they fall heavily.

*The Corn Laws.*—Sir Robert Peel will undoubtedly be able to get these odious laws repealed in due time.

*Cholera among Cattle.*—A violent disease is raging among the cattle of Russia, similar in every respect to the cholera.

*Prices at which Grain can be grown in England.*—Wheat, 4s. 10½d. the bushel, or 69s. the quarter; barley, 2s. 10½d., or 22s. 10d. per quarter; and oats 2s. 3½d. per bushel, or 18s. 4d. per quarter, including rent and all other charges.

*Indian Corn.*—Father Matthew and other benevolent persons are making exertions to introduce the use of Indian corn in Ireland and Great Britain, in bread, cake, and pudding, as used in the United States.

*To Destroy Gooseberry Caterpillars.*—I destroy these by shaking them from the trees, then by tying a piece of Cabbage-leaf around the stem of tree with a circle of gas tar upon it. This prevents the caterpillars from again ascending, and when without food they soon perish.—*Far. Herald.*

*To Preserve Potatoes.*—I am happy to state that all which were packed in charred sawdust, charred old tan, and other refuse, as well as those packed in dry turf-ashes, are as sound and free from disease as could be wished; they are dry, mealy, and fine flavored; but those that were pitted or packed in the usual way have rotted wholesale, and the effluvia arising from them is very unpleasant.—*Ib.*

*German Farming.*—Agriculture is improving rapidly in some districts of this part of Germany, particularly in the neighborhood of those towns which have much trade with England in grain, and the consequence is that the land is now raising in value. I know of instances where, within the last twenty years, the value of land has been increased to more than double. But there is still great room for improvement. The land is farmed, for the most part, by proprietors whose properties vary from three to thousands of acres, according to the districts in which they are situated. In some localities the farms are all small, in which case the farm buildings are all collected in villages. Sometimes as many as seven or eight compose a village. Farms of this description are to be found near the towns, which they supply with milk. The farm-house and offices are generally connected and under the same roof. This building is oblong, with roofs at the gables as well as at the sides. One end is devoted to the dwelling-house, before which is a patch of ground very neatly laid out as a kitchen and flower garden. The kitchen fire is often on the outside of the wall, which divides the farmer's rooms from the rest of the building, which is tenanted by the cows on the one side, and the horses on the other, and the carts and implements are placed between them; while at the end are large folding doors, which close in all the farmer's movable property. But the generality of the farms are large, and possessed and farmed by a most respectable class of men, many of whom are men of education; and they are all distinguished for their great kindness and hospitality. The house on such farms is quite separate from the offices, and is surrounded generally by an extensive garden. The offices are in the form of a square, inclosing an area in the middle for the accumulation of the manure. They consist of byre, stable, and sheep-shed, grain-shed—for all the grain is kept in houses instead of stacks—and servants' houses. The buildings are often erected according to the most approved principles for convenience and comfort to the animals. The sheep are always kept up in the winter, when they get potatoes and hay, and the greater part of the summer, when they got clover Some of these sheds are very large, capable of contain ing 1500 sheep. There is a walk made along the side of one of the walls, and the area between it and the other wall is divided into compartments, by means of railings, designed to hold a certain number of sheep; each of these divisions is furnished with a rack for the hay and clover, and troughs for ground food: and a small gate leads from the side walk to each division, so the keeper can supply the different lots with food, and inspect them without much trouble or disturbance to the whole flock.—*Journal of Ag.*

*Advantages of Mixing Soils.*—I may mention that in improving land I found that *mixing of different soils*, and giving them a stimulus, is the most effectual mode of improvement. For example: after draining mossy soil, I found the ground too soft to bear the tread of horses; and a hillock of gravel being near at hand, I spread three or four inches of it over the moss, and after ploughing, gave the ground first dung, and the following year lime. The produce was great, and the land has since produced superior grass.—*Scot. Far.*

*Double Culture.*—There is nothing new in growing two crops together and at the same time; we have in our island followed that system with success, ever since I can remember, and that is upwards of thirty years. For instance, when we grow a parsnip crop, which we find advantageous as food for our milch cows, as it makes both milk and butter, sweet, rich, and good, we dibble beans in double rows, the beans four inches apart, with an interval of six or eight feet to the next rows, after which we sow the parsnip-seed, harrow it, &c., and we generally reap a good crop of each. The crop of beans does not seem to injure in the least the parsnip crop. We generally grow beans with our spring and late cabbage crops. In every third row of cabbages we dibble beans between each cabbage. We often follow the same system with our crop of potatoes—dibble beans between the sets in every third row of potatoes, leaving a distance of about two yards between each bean. The beans seem to thrive amazingly by this manner of planting, and the main crops are not in the least injured by it. By this system the farmer is greatly benefited, having at the same time an underground and top crop.

*To Ascertain the Value of Cows for the Production of Cream.*—Provide a number of half-pint white glass phials, corresponding with the number of Cows in the dairy; label and number them consecutively, 1, 2, 3, &c., and the cows to correspond. Fill each phial with the first milk of the Cow bearing the same number; note down the quantity of milk each cow gives. After the milk has stood in the phials about 12 hours, the eye can readily discriminate the amount of cream that each produces, which mark down by sixteenths of inches. Pursue the same plan at the next milking about the middle of the time of milking, and again a third time at the latter end of milking. The quality may thus be easily ascertained.—*Far. Herald.*

# Editor's Table.

THE AMERICAN HERD BOOK.—Mr. L. F. Allen informs us, that he has the Herd Book now in press, and that it will probably be ready for delivery the last of May. It has been kept back on account of the tardiness of breeders in furnishing their pedigrees. In addition to these, it will contain a history of Short-Horns, and general remarks on the breeding and rearing of cattle. It will make a volume of about 200 pages octavo.

THE FARMER'S DICTIONARY. A Vocabulary of technical terms, and Compendium of Practical Farming. Edited by D. P. Gardner, M.D. Pp. 876, and some 400 wood cuts, for $1.50. Harper & Brothers, 82 Cliff Street. It gives us much pleasure to find that this useful book is at last published; nearly two years ago we alluded to the undertaking as calculated to be of great service. Dr. G. has devoted great pains to this favorite engagement, and is at once a theoretical and practical farmer. This work consists of two parts.—A Dictionary of the scientific terms, as ammonia, nitrogen, eremacausis, &c., which we plain farmers find so plentifully besprinkled in modern essays, and which being new words, are sometimes rather awkward to get over. The other part is made up of practical essays on the cultivation of crops. In this division we see with great pleasure that the staples of the Mediterranean, such as olives, madder, liquorice, poppies, &c., are treated of, and also tea, rhubarb for the druggist, and numerous important products, which can certainly be cultivated in the extent of our territory, reaching, as it does, to the Rio Grande and Pacific. These essays are from the very best authorities, as Rham, Low, Loudon, and the great authors of Agriculture. In Veterinary matters and Grazing, as well as Horticulture, we find the most satisfactory matter. These two parts are not kept separate, but mixed in the dictionary form.

There is a peculiar feature in the book, altogether new, and we believe important. After each plant, the editor has placed the best account of the composition of the ashes, and made some observations on the particular manures suited to the crop. Now this is the peculiarity of the new or Chemical Agriculture, by an examination of the ash of plants, to discover the means of applying the proper manure at the least expense. So, if we find that lime or common salt is all important to a certain crop, we use it, and are saved the great expense of adding a compost containing every fertilizer. This part of the book is very worthy of study, and from our knowledge of the author and his scientific reputation, we do not hesitate to say it is well done. It seems to us that the work is one which will be very valuable to the practical man, from the numerous practical suggestions it contains; to the theoretical farmer, because it is full of information on manures, saline bodies, organic matters, &c.; and also to the general reader, because it presents a fund of information on Agriculture and Horticulture, in a compact form, which cannot otherwise be procured without the use of a large library. Few books we believe have ever been published in Agriculture so useful and so well adapted to the particular wants of the community. It is a handsome volume, printed in clear brevier type, and marvellously cheap. Every farmer should get it, to place on the same shelf with his Agriculturist. We have it for sale at our warehouse.

OBSERVATIONS ON THE POTATO, AND A REMEDY FOR THE POTATO PLAGUE.—This is an elegant octavo pamphlet of 110 pages, by Charles P. Besson. Published by E. L. Pratt, Boston, Price 25 cents. It contains a history of the Potato, its Cultivation, and Uses, as well as a Treatise on the late malady, so injuriously affecting it in this country and in Europe. The work is written with no little research and ability, and comes before us opportunely. We bespeak for it an attentive perusal, for on the safety of this crop the lives of millions are dependant, and unless the disease be stayed, the consequences will be want, suffering, and death.

THE NATURALIST, and Journal of Agriculture, Horticulture, Education, and Literature, conducted by I. N. Loomis, J. Eichbaum, J. S. Fowler, and T. Fanning. At Franklin College, Tennessee. In monthly numbers of 48 pages, octavo. Price $2 a year in advance. This periodical is the successor of the Tennessee Agriculturist, and we hail the issue of it with great pleasure. It is conducted by the President and Professors of the Agricultural College at Franklin. Its papers treat of the science and practice of agriculture, and are written with clearness, simplicity, and ability. We have faith to believe that this work will ultimately exercise a happy influence in the great Mississippi valley, and we trust it will immediately find a generous support. A specimen number can be seen at our office in Water Street, where we will gladly receive subscriptions and forward them to the publishers.

THE LIFE AND TIMES OF HENRY CLAY. By Calvin Colton. Published by A. S. Barnes & Co., 51 John Street, N.Y. Two volumes, octavo. Price $5. However much people may differ in regard to the character of Mr. Clay as an orator and politician, none will deny that he is an eminent farmer, and has ever been foremost in promoting the interests of the great agricultural class. Few have done more for the introduction and growth of hemp in the West than Mr. Clay; and it is now not only extensively consumed at home in the different manufactures of bale rope, cotton bagging, cordage, &c., but has at length become quite an article of export to Great Britain. He has also been equally efficient in the importation and the improvement of the various breeds of domestic animals, as we had the pleasure of seeing for ourselves, when we visited his beautiful estate at Ashland—and this, by the way, we found a pattern farm under a high state of cultivation. These volumes are embellished with a spirited portrait of Mr. Clay, and an engraving of the humble log school-house at the Slashes of Hanover, where he received the first rudiments of his education. It is a pretty delicate thing to write the biography of a living man; yet, so far as we can judge, Mr. Colton has done it with great fairness, and in his usual attractive and condensed style. We dismiss these elegant volumes, by agreeing with him when he says: "The man who leaves his impress on a great nation, and imparts character to the age in which he lives, not only merits the regard of contemporaries, but will be a study for future generations. That Henry Clay occupies this position in the social state of mankind, by a consideration of the past, and in the prospects of the future, will scarcely be questioned. His name, character, and history, are identified with the history of his country; and the student who makes himself acquainted with his life, private, professional, and public, will not be ignorant of the career of the United States of North America, as one of the family of nations."

A TREATISE ON DOMESTIC ECONOMY. For the use of young ladies at Home and at School. By Miss Catharine Beecher. A newly revised edition, with numerous illustrative engravings, pp. 369, octavo. Price 75 cents. Harper & Brothers. This is a highly useful work, as it has been written expressly for American ladies by one of the most eminent of their own sex. We wish they would study it faithfully, for it is calculated alike to improve them, mentally and physically. Of the latter point there is great need.

# New York State Agricultural Society.

*Cattle Show and Fair for* 1846, *to be held at Auburn, Sept.* 15, 16, *and* 17.

## PREMIUM LIST FOR 1846.

### ON FARMS.

For the best cultivated farm of not less than 50 acres, exclusive of woodland, regard being had to the quantity of produce, the manner and expense of cultivation, and the profits:

First premium,.....$50 | Second do.,.....$30
Third do.,.....$20

The persons making application for these premiums, must submit written answers to a series of questions, printed copies of which may be obtained on application to J. B. Nott, Secretary.

### EXPERIMENTS AND ESSAYS.

For the most satisfactory experiment of stall feeding cattle, with a full detail of all the circumstances,..... $20
For the most satisfactory experiment in converting green crops or other vegetable matters into manure, with full details, &c..... 10
For the most satisfactory experiment made for increasing manures in forming compost,..... 10
For the most satisfactory experiment for top dressing grass, 10
" " " subsoil plowing,..... 10
" " " eradicating Can. thistle,.. 10
" " " draining,..... 10
" " " irrigation..... 10
" " " on the improvement of seed wheat, by culture and propagation,..... 10

### FARM DWELLINGS.

For the best design accompanied with plans and elevation, combining convenience, economy, and good taste.

For best,.....$15 | Second best,.....$10

Competitors for the premiums on Experiments and Designs, must forward their manuscripts to the Secretary, Albany, previous to the 1st of December, 1846, free of postage.

### CATTLE.

#### CLASS I.—Durhams.

Best Bull, over 3 years old,..$15 | Second best,.....$10
Third best, Diploma.
Best bull, 2 years old.....$10 | Second best,....Colman's Tour.
Third best, Diploma.
Best yearling bull,.....$10 | Second best,....Colman's Tour.
Third best, Diploma.
Best bull calf,..Colman's Tour. | Second best,.....Diploma.
Best cow, 3 years old,.....$15 | Second best,.....$10
Third best, Diploma.
Best heifer, 2 years old,....$10 | Second best,....Colman's Tour.
Third best, Diploma.
Best yearling heifer,.....$10 | Second best,....Colman's Tour.
Third best, Diploma.
Best heifer calf, Colman's Tour. | Second best,.....Diploma.

#### CLASS II.—Herefords.

Best bull, over 3 years old,..$15 | Best cow,.....$15
Second best,..... 10 | Second best,..... 10
Best bull between 1 and 3 years old,..... 10 | Best heifer between 1 and 3 years old,..... 10
Second best,.....Diploma. | Second best,.....Diploma.

#### CLASS III.—Devons.

Best bull, 3 years old.....$15 | Best cow,.....$15
Second best,..... 10 | Second best..... 10
Best bull, between 1 and 3 years old,..... 10 | Best heifer, between 1 and 3 years old,..... 10
Second best,.....Diploma. | Second best,.....Diploma.

#### CLASS IV.—Ayrshires.

Best bull, over 3 years old,..$15 | Best cow,.....$15
Second best,..... 10 | Second best,..... 10
Best bull, between 1 and 3 years old,..... 10 | Best heifer, between 1 and 3 years old,..... 10
Second best,.....Diploma. | Second best,.....Diploma.

#### CLASS V.—Crosses of Native and Improved.

Best cow, over 3 years old,..$15 | Third best, two years old, heifer,.....Vol. Trans.
Second best,..... 10 | Best yearling heifer,.....$5
Third best,.....Vol. Trans. | Second best,....Colman's Tour.
Best 2 year old heifer,..... 15 | Third best,.....Vol. Trans.
Second best,..... 10 | Best heifer calf, Colman's Tour.

#### CLASS VI.—Native Cattle.

Best cow, over 3 years old,..$15 | Third best, 2 year old heifer,..$5
Second best,..... 10 | Best yearling heifer,..... 5
Third best,.....Vol. Trans. | Second best,....Colman's Tour
Best heifer, 2 years old,.... 15 | Third best,.....Vol. Trans.
Second best,..... 10 | Best heifer calf, Colman's Tour.

#### WORKING OXEN.

Best team of 20 yoke from any one Co.,.....$25 | Third best yoke,....Vol. Trans.
Second best,..... 15 | Best 10 yoke of oxen from any one town,.....$20
Best yoke of oxen,..... 15 | Second best,..... 20
Second best,..... 10 | Third best,.....Colman's Tour.

#### THREE YEAR OLD STEERS.

Best yoke,.....$10 | Second best,.....$5
Third best, Diploma.
Best team of 10 yoke from any one county,....$15.
To boys between the ages of 16 and 20 inclusive, who shall exhibit the best broke yoke of 3 year old steers, of their own training, Colman's Tour.
Second best do.,.....Diploma. | Third best do.,....Transactions

#### TWO YEAR OLD STEERS.

Best yoke,.....$10 | Second best,....Colman's Tour.
Third best, Vol. Trans.
To boys under 16 years of age who shall exhibit the best broke yoke of 2 year old steers of their own training, Col. Tour.
Second best,.....Diploma. | Third best,.....Vol. Trans.

#### YEARLING STEERS.

Best yoke,.....$8 | Second best,....Colman's Tour.
Third best, Vol. Trans.
To boys under 16 years of age who shall exhibit the best broke yoke of yearling steers of their own training, Colman's Tour.
Second best,.....Diploma. | Third best,.....Vol. Trans.

In awarding the premiums on working oxen and steers, the single teams will be subjected to a trial on a loaded cart or wagon, under the direction of the committee; and particular reference will be had to the matching, training, and docility of the animals, as well as their general appearance.

#### FAT CATTLE AND FAT SHEEP.

Best pair fat oxen.....$15 | Second best,.....$10
Third best, Colman's Tour.
Best ox or steer,.....$10 | Second best,.....$5
Third best, Vol. Trans.
Best fat cow or heifer,.....$10 | Second best,.....$5
Third best, Vol. Trans.
A fat ox taking a premium as one of a pair, cannot compete singly for another premium.
Best fat sheep,..... $10 | Second best,...Colman's Tour.
Third best, Vol. Trans.

Applicants for the premiums on fat cattle and sheep, must furnish statements of the manner of feeding the animals, and the kind, quantity, and cost of the food.

### STALLIONS.

#### CLASS I—*for all work.*

Best, over 4 years old,.....$10 | Third best,.....Diploma
Second best,..... 5 | Fourth best,.....Vol. Trans

#### CLASS II—*Blood.*

Best, over 4 years old.....$10 | Third best,.....Diploma.
Second best,..... 5 | Fourth best,.....Vol. Trans.

#### CLASS III—*Draught.*

Best, over 4 years old,.....$10 | Third best,.....Diploma.
Second best,..... 5 | Fourth best,.....Vol. Trans.

#### THREE YEAR OLD STALLIONS.

Best 3 years old stallion,...$10 | Third best,.....Diploma.
Second best,..... 5 | Fourth best,.....Vol. Trans.

#### GELDINGS.

Best gelding,.....$5 | Second best,.....Vol. Trans.

#### MATCHED HORSES.

Best pair,.....$10 | Second,.....Diploma.
Third best, 2 Vols. Trans.

#### MARES.

Best brood mare (with foal at her foot), for all work, $10.
Second best,.....$5 | Third,.....Diploma.
Fourth, Vol. Transactions.
Best brood blood mare (with foal at her foot), $10.
Second best,.....$5 | Third,.....Diploma.
Fourth, Vol. Transactions.
Best brood draught mare (with foal at her foot), $10.
Second best,.....$5 | Third,.....Diploma.
Fourth, Vol. Transactions.
Best mare, 3 years old,.....$5 | Second best,.....Diploma.
Third, Vol. Transactions.

### SHEEP.

#### CLASS I.—Long Woolled.

Best buck,.....$8 | Best 5 ewes,.....$6
Second best,...Colman's Tour. | Second best,....Colman's Tour.
Third best,.....Diploma. | Third best,.....Diploma.
Best pen 5 lambs, $5.

### CLASS II.—Middle Woolled.

Best buck,.....$8 | Best 5 ewes,.....$8
Second best,...Colman's Tour. | Second best,....Colman's Tour.
Third best,.....Diploma. | Third best,.....Diploma.
Best pen 5 lambs, $5.

This class includes the Southdown, Norfolk, Dorset, Native, &c.

### CLASS III.—Merinos and their Grades.

Best buck.....$8 | Best five ewes,.....$8
Second best,...Colman's Tour. | Second best,....Colman's Tour
Third best,.....Diploma. | Third best,.....Diploma.
Best pen 5 lambs, $5.

This class includes all those generally denominated Merinos, whether of pure or mixed blood.

### CLASS IV.—Saxons and their Grades.

Best buck,.....$8 | Best five ewes,.....$8
Second best,...Colman's Tour. | Second best,....Colman's Tour.
Third best,.....Diploma. | Third best,.....Diploma.
Best pen 5 lambs, $5.

This class includes all those generally denominated Saxons, whether of pure or mixed blood.

### SWINE.

Best boar, over 10 months,..$10 | Best sow,.....$10
Second best,...Colman's Tour. | Second best,....Colman's Tour.
Third best,.....Diploma. | Third best,.....Diploma.
Best lot of pigs under 10 months, not less than four in number, Colman's Tour. Second best, Diploma.

In awarding premiums on hogs, reference will be had not merely to size or present condition, but to that proportion between bone and meat which promises the greatest value from the least amount of feed.

### POULTRY.

For the best lot of Dorking fowls, not less than 3, one cock and two hens,.....$3
For the best lot of Black Poland, not less than three,..... 3
For the best lot of large fowls, not less than three,..... 3
For the best pair of ducks,..$3 | For the best pair of turkeys,.. 3
For the best pair of geese,..... 3
For the best and greatest variety of barn yard fowls owned by the exhibitor,..... 10

### FARM IMPLEMENTS.

Best plow,*.....Silver Medal | 2d best straw cutter,..Diploma.
Second do.,.....Diploma. | Third do.,....Vol. Transactions.
Third do.,.....Vol. Trans. | Best corn and cob crusher,..$10
Best subsoil plow, Silver Medal | Second do.,.....Diploma.
Second do.,.....Diploma. | Third do.,...Vol. Transactions.
Third do.,...Vol. Transactions. | Best clover machine,.....$10
Best farm wagon, Silver Medal. | Second do.,.....Diploma.
Second do.,.....Diploma. | Third do.,...Vol. Transactions.
Third do.,...Vol. Transactions. | Best flax and hemp dresser,..$10
Best harrow,.....Silver Medal. | Second do.,.....Diploma.
Best cultivator,...Silver Medal. | Third do.,...Vol. Transactions.
Best fanning mill, Silver Medal. | Best horse cart,.....Diploma.
Second do.,.....Diploma. | Best ox cart,.....do....
Third do.,...Vol. Transactions. | Best horse rake,.....do....
Best horse power,.Silver Medal. | Best ox yoke,.....do....
Second do.,.....Diploma. | Best farm harness,.....do....
Third do.,...Vol. Transactions. | Best saddle,.....do....
Best corn stalk cutter, Sil. Med. | Best grain cradle,.....do....
Second do.,.....Diploma. | Best six hand rakes,.....do....
Third do.,.....Vol. Trans. | Best six hay forks,.....do....
Best threshing machine, Silver Medal. | Best six grass scythes,...do....
Second do.,.....Diploma. | Best six cradle scythes,..do....
Third do.,...Vol. Transactions. | Best six dung forks,.....do....
Best drill barrow,.....Diploma. | Best six axes,.....do....
Best straw cutter,.Silver Medal. | Best six hoes,.....do....
| Best hay rigging.....$5

* The trial of plows will take place on Tuesday, Sept. 15th.

For the best and most numerous collection of agricultural implements,.....$10
Also, for the best and most numerous collection of agricultural implements manufactured in the State of New York, by or under the supervision of the exhibitor,.....Silver Medal.

### PLOWING MATCH.

First premium,.....$15 | Third premium,.....$10
Second do.,..... 12 | Fourth do.,.....Colman's Tour.
Fifth, Vol. Transactions.

For boys under eighteen years of age:

First premium,.....$10 | Second,.....$5
Third, Vol. Transactions.

One-fourth of an acre will be required to be plowed within an hour and a quarter, with 15 minutes for rest—the furrow slice to be not over 12 inches wide, nor less than 8 inches in depth. The plowman to drive his own team, and the furrow slice to remain as left by the plow.

### BUTTER.

For the best lot (quality as well as quantity considered) made from five cows, in 30 successive days—25 lbs of the butter to be exhibited, $25.
Second best,.....$15 | Third best,.....$10

Compliance with the following rules will be strictly required of those who compete for these premiums, viz.: The cows to be fed on pasture, green corn-stalk fodder, or grass cut for the purpose, only. No grain, roots or slops of any description, to be fed during the trial, nor for fifteen days preceding the trial. The cows to be owned by the competitors previous to the 1st day of Febr., 1846. The milk drawn from the cows on some one day during the trial to be accurately weighed and measured, and the result stated. A sample of at least 25 lbs. of the butter so made to be exhibited at the fair at Auburn, for the inspection of the examining committee. The particular breed of the cows to be stated, if known, and the method of making and preserving the butter. A certificate signed by the owners of the cows, and at least one other person who assisted in milking and making the butter, detailing the above particulars, will be required.

The executive committee believe that few, if any, premiums offered on neat cattle will result in greater benefit to the farming interest, than those on the products of the dairy, providing fixed rules, requiring uniformity of feed, be faithfully enforced. The increased list of premiums is offered with the hope it will induce extensive competition throughout the State. Let this object be accomplished, and an opinion approximating to accuracy may be formed by the public which of the several breeds of cows are the best for dairy purposes, and from those that prove the best, further improvement may be made.

Best 25 lbs. made in June,..$10 | Second best,...Colman's Tour.
Second best,....Colman's Tour. | Third best,.....Silver Medal.
Third best,..Vol. Transactions. | Fourth best,.....Diploma.
Best 50 lbs. made at any time $15 | Fifth best,...Vol. Transactions.

The claimants for premiums must state in writing the time when it was made; the number of cows kept on the farm; the mode of keeping; the treatment of the cream and milk before churning; the mode of churning winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substances have been employed.

The butter offered for premiums must be presented in butter tubs, jars, or firkins.

### CHEESE.

One year old and over.

Best 100 lbs.,.....$15 | Third best,.....Silver Medal.
Second best,...Colman's Tour. | Fourth do.,.....Diploma.
Fifth do., Vol. Transactions.

Less than one year old.

Best 100 lbs.,.....$15 | Third best,.....Silver Medal.
Second best,...Colman's Tour. | Fourth do.,.....Diploma.
Fifth do., Vol. Transactions.

Those who present cheese for the premiums offered, must state in writing the time when it was made; the number of cows kept; whether the cheese was made from one, two, or more milkings; whether any addition is made of cream; the quantity of rennet used, and the mode of preparing it; the mode of pressure, and the treatment of cheese afterwards.

### DAIRIES.

For the best cheese dairy,..$50 | Second best,.....$30
Third best, $20.
B. P. Johnson, of Rome, Oneida county, Chairman.
For the best butter dairy, $25 | Second do.,..$15 | Third do.,..$10
Zadoc Pratt, of Prattsville, Chairman.

The competitors for the above premiums must comply with the following regulations. They must state the actual product of the cheese or butter dairy; the locality of such dairy in latitude; the composition of the soil as near as may be where the dairy farm is situated; the kind of grass used for pasture and for hay; the quantity, in pounds, of milk per cow on the average and in the aggregate; the quantity of cheese or butter to the hundred pounds of milk produced; the gross quantity of milk and cheese, or butter, produced; the quality of the cheese or butter; the method of making; the breed of cows composing the dairy; and all such other details produced as shall determine the most profitable mode of conducting the cheese or butter dairy business.

### SUGAR.

Best 25 lbs. maple sugar,...$10 | Third best.....Diploma.
Second best,..... 5 | Fourth best,.....Vol. Trans.
For the best 25 pounds of Cornstalk sugar, Silver Medal.
No premium to be awarded unless the sample offered shall be deemed worthy of it.
The process of manufacture and clarifying must be particularly stated in reference to the maple and cornstalk sugar.

### SILK.

Best specimen manufactured (woven into cloth or ribbons).....$15 | Best specimen sewing silk, not less than one pound, of domestic growth,.....$10
Second best,..... 10 | Second best,..... 5
Third best,.....Colman's Tour. | Third best,.....Diploma.
Fourth best,.....Vol. Trans. | Fourth best,.....Vol. Trans.
Best specimen not less than one pound reeled silk,.....$5 | Best one-half bushel cocoons, 1846,.....$10
Second best,.....Diploma. | Second best,...Colman's Tour.
Third best,.....Vol. Trans. | Third best,.....Diploma

## DOMESTIC MANUFACTURES.

Best woollen blankets, $5—Second, 4—Third, 3.
Best ten yards flannel, $5—Second, 4—Third, 3.
Best ten yards woollen cloth, $5 Second, 4—Third, 3.
Best woollen carpet, $5—Second, 4—Third, 3.
Best tow cloth, 15 yards, $3—Second, Diploma.
Best ten yards linen, $5—Second, 4—Third, 3.
Best ten yards linen diaper, $5—Second, 4—Third, 3.
Best hearth rug, $5—Second, 4—Third, 3—Fourth, 2—Fifth. Trans—Sixth, Diploma.
Best ten yards kersey, $3—Second, 2—Third, Trans.
Best rag carpet, 15 yards, $3—Second, 3—Third, Trans.
Best double carpet coverlet, $4—Second, 3—Third, 2—Fourth Trans.
Best pair woollen knit stockings, $2—Second, Trans.—Third, Diploma.
Best wove woollen stockings, $2—Second, Trans.—Third, Diploma.
Best cotton wove stockings, $2—Second, Vol. Trans.—Third, Diploma.
Best lb. of linen sewing thread. $2—Second, Trans.—Third, Diploma.
Best linen woven stockings, $2—Second, Tr.—Third, Dip.
Best linen knit stockings, $2—Second, Trans.—Third, Dip.
Best knit cotton stockings, $2—Second, Trans.—Third, Dip.

Best bed quilt, or other bed or window furniture, discretionary premiums, at the option of the committee.

## FRUIT.

For the greatest variety table apples, $5
For the second greatest,....$3 | For the third greatest,..Vol. Tr,
For the best twelve sorts, not less than three of each, $3.
Best new seedling apple,.....$3
For the greatest variety of table pears,..... 3
For the second greatest,.....Vol. Trans.
For the greatest variety of winter pears,.....do....
For the best twelve quinces,.....do....
For the best twelve peaches,.....do....
For the best twenty-four plums.....do....
For the best six bunches of native grapes,.....do....
For the best six bunches of foreign grapes,.....do....
For the best dozen figs,.....Diploma.
For the second best,.....Vol. Tr....
For the best one-half dozen oranges,.....do....
For the best one-half dozen lemons,.....do....
For the best dozen nectarines,.....do....
For the best dozen apricots,.....do....
For the best dozen pomegranates,.....do....
For the best pint of almonds.....do....

*Resolved*, That a committee of —— be appointed by the Executive Committee, who shall report at the next annual meeting a list of not exceeding 30 kinds of apples, which shall be in their opinion best adapted to the economical demands of the people of this State, and be best suited to the different localities of the same, comprising their most extensive use in all seasons, for home consumption, and for exportation, the individual names of said fruits, a drawing of each separate kind, with a particular description thereof; and that in this connection they also take into consideration the several classes of fine fruits as adapted to the above purposes, and —— dollars be appropriated as in the judgment of the Executive Committee shall be necessary to accomplish this object.

*Committee.*—L. F. Allen, Black Rock; Dr. A. Stevens, New York; Dr. A. Thompson, Aurora; I. C. Platt, Plattsburgh; Prof. J. Jackson, Schenectady.

## FLOWERS.

For the greatest variety and quantity, Silver Medal.
For the second greatest,...Dip. | For third greatest,..Vol. Trans.
For the best Floral ornament, Silver Medal.
For the second best,..Diploma. | For best seedling dahlia,...Dip.
For third best,.....Vol. Trans. | For the second best, Vol. Trans.
For the best twenty-five varieties of Dahlias, Silver Medal.
For the second best,...Diploma | For the third best,..Vol. Trans.
For the most beautiful boquet, composed of not less than twelve varieties, Colman's Tour.
Second best,.....Diploma. | Third best,.....Vol. Trans.
For the greatest variety of house plants owned by one individual,....Diploma. | Second greatest, Vol. Trans.
For the best 20 varieties German asters,.....Vol. Trans.
For the best six varieties carnation pink,.....do....
For the best 12 varieties roses in bloom.....Diploma.
Second best,.....Vol. Trans.
For the best 3 varieties of Cactus in bloom,.....Diploma.
For the best 3 varieties Camellia Japonica, in bloom.....do....
For the best single Camellia in bloom,.....do....
Best 6 Geraniums in bloom,.....do....
Second best,.....Vol. Trans.

## VEGETABLES.

24 best stalks celery, 2 vols. Tr.
6 best heads cauliflower,..do..
6 best heads broccoli,.....do..
12 best white table turnips,.....Vol. Trans.
12 best carrots,.....do....
12 best table beets,.....Vol. Tr.
12 best parsnips,.....do....
12 best onions,.....do....
3 best heads of cabbage,..do....
12 best tomatoes.....do....
2 best purple egg plants,do....
12 best sweet potatoes,..Trans.
12 best water melons,....Trans.
Best half peck Lima beans, Vol. Trans.
Best half peck Windsor beans,.....Vol. Trans.
Best bunch double parsley,.....Vol. Trans.
Three best squashes,....do....
Largest pumpkin,.....do....
12 best ears seed corn,...do....
Best half peck table potatoes,.....$2
Second best,.....Trans.
Best seedling potato,.....$5
12 Canteleup melons,....Trans.

Discretionary premiums will be awarded on choice garden products not above enumerated.

## MISCELLANEOUS.

Best Iron Gate for farm purposes,.....Silver Medal.
Best ornamental cast-iron vase, on pedestal,.....Diploma.
Best sample drain tile,.....Diploma.
Best quarter of an acre of osier willow, and the best specimens manufactured from the product, $8.
Best specimen wire hurdle fence, to be accompanied with an account of cost, Silver Medal.

## DISCRETIONARY PREMIUMS

Will be awarded for—
1st—Stoves and other Manufactures of Iron.
2d—Paintings and Drawings.
3d—Ornamental Shell, Needle, and Wax work.
4th—Implements and Machinery.
Also, for all such other articles and products not enumerated above, as shall be deemed worthy of encouragement.

## FIELD CROPS.

Best crop of wheat raised upon any one farm, $15.
Second best,.....$10 | Third best,.....2 Vols. Trans.
Best crop of spring wheat raised upon any one farm, $15.
Second best,.....$10 | Third best,.....2 Vols. Trans.
Best crop of Indian corn raised upon any one farm, $15.
Second best,.....$10 | Third best,..Vol. Transactions.
Best crop of barley raised upon any one farm,.....$10.
Second best,.....$5 | Third best,..Vol. Transactions.
Best crop of rye raised upon any one farm,.....$10.
Second best,.....$5 | Third best,..Vol. Transactions.
Best crop of oats raised upon any one farm,.....$10.
Second best,.....$5 | Third best,..Vol. Transactions.
Best crop of potatoes for table, raised upon any one farm, $10.
Second best,.....$5 | Third best,..Vol Transactions.
Best crop of potatoes, quantity considered, raised upon any one farm, $10,
Second best,.....$5 | Third best,..Vol. Transactions.
Best crop of sugar beets raised upon any one farm, $10.
Second best,.....$5 | Third best,..Vol. Transactions.
Best crop of mangel wurzel raised upon any one farm, $10.
Second best,.....$5 | Third best,..Vol. Transactions
Best crop of ruta baga raised upon any one farm,....$10.
Second best,.....$5 | Third best,..Vol. Transactions
Best crop of carrots raised upon any one farm,.....$10.
Second best,.....$5 | Third best,..Vol. Transactions
Best crop of peas raised upon any one farm,.....$10.
Second best,.....$5 | Third best,..Vol. Transactions

N.B. It is understood the above premiums are to be awarded for crops raised in the usual cultivation of the farm—to include the entire crop raised in each case. It is not intended to offer premiums for crops raised on small parcels of land—by unusual manuring and cultivation.

Best acre of corn, for fodder, $5.
Best half acre of hops,.....$5 | Best half acre of tobacco,...$5
Best half acre of flax,..... 5 | Best acre of cabbage,..... 5
Best acre of broom corn, $5.
Best acre of clover seed, $10.
Second best,..Colman's Tour. | Third best,..Vol. Transactions.
Best acre of timothy seed, $10.
Second best,..Colman's Tour. | Third best,.....Diploma.

Those who present claims to premiums for farm crops, must state in writing the following particulars: The condition of the soil at the commencement of cultivation for the crop; the previous crop and cultivation, and quantity of manure used upon it; the quantity and kind of manure the present season; the quantity and sort of seed used; the time and manner of sowing, cleaning, and harvesting the crop; the amount of the crop determined by actual weight or measurement, and the expense of cultivation. The land shall be measured by some surveyor, who shall swear to the correctness of his survey, and that it was made with a chain and compass; and the claimant of the premium, with two other persons who assisted in measuring, shall certify under oath as to the quantity produced from the piece of land mentioned in the certificate of the surveyor—and a sample of grain shall be presented at the annual meeting, with the oath of the applicant, that the same is a fair sample of the whole crop.

The statements required from those who compete for the premiums on farms and field crops, must be sent to J. B. Nott, Recording Secretary, Albany, previous to the 1st of December, 1846, and the premiums will be awarded at the annual meeting of the Society on the third Wednesday of January.

N.B. Plate will be substituted for money, on the application of the persons receiving the premium.

## PREMIUMS FOR 1847—1848—1849.

Whereas, the Agricultural Society of the State of New York has not an experimental farm; and whereas, to some extent, satisfactory experiments can be made by intelligent farmers on their own farms; therefore

*Resolved*, That the undermentioned list of premiums be offered to induce public spirited individuals to lend their valuable aid in extending the boundaries of accurate rural knowledge.

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Three premiums will be awarded of $30, $20, and $10, in January, 1848. For the best experiment upon a head of not less than eight cows, to determine the relative advantages of soiling, or depasturing milch cows. The experiment to be conducted as follows:

1st. The experiment must commence on the first day of May, and be continued until the first day of November.

2d. The cows to be divided in two lots of four each. One lot to be soiled, the other depastured. Before commencing the experiment, each lot must be weighed, and the record of the weight returned to the committee. It is necessary that the two lots shall be as near alike in weight and milking properties as possible.

3d. The milk of each lot to be weighed separate daily.

4th. The manure made from those soiled to be ascertained in cords.

5th. An account to be kept of the expense of soiling, also a detailed statement of the entire management, together with the measurement of the land occupied in soiling, and each to be returned to the committee.

6th. A description and measurement of the land occupied for pasture, also to be made.

7th. Each lot to be weighed at the conclusion of the experiment.

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For the best experiment to be continued through three crops, to ascertain in bushels of grain and weight of stalks or straw the actual value of manure to a farmer. The experiments to be conducted as follows, viz.:

1st. Three contiguous acres of ground shall be selected.

2d. One acre of which shall be manured with not more than ten cords of common barn yard manure the first year, and plowed under. The second acre to be manured with fermented or composted manure, to be applied in any manner the experimenter chooses—but a full account of the mode is to be made, and the manner of application. Also, an accurate account of the cost of the material and its application.

3d. The three acres are to be planted with corn the first year; the second to be sowed with barley or oats; the third crop to be winter grain; an accurate account of the yield of each crop to be kept.

4th. A full account of the whole management and all the details respecting the culture and the circumstances affecting the crop.

5th.—The several kinds of soil to be particularly described, and specimens transmitted to the State Society for analysis, before commencing the experiment—and also at the conclusion of the experiment—discriminating carefully between each acre.

For the best,..$40 | Second best,..$30. | Third best,..$20.

N.B. The specimens of soil to be selected for analysis, must be taken from the surface in different parts of the acre. Where the acre is green sward, the sample must be taken just at the termination of the roots of the grass. Specimens should also be selected from the depth of seven or eight inches. At all events, immediately below the usual depth to which the plow runs. The specimens of soil must in no case be mixed; and should consist of about 1 lb., sewed in a cotton bag.

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$20 will be paid at the Annual Meeting of the Society, in 1848, to the person who will make the most satisfactory agricultural experiment—accuracy and the importance of the experiment to be taken into consideration. A full detail of the experiment and its results must accompany the application.

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For the best managed entire flock of sheep, of not less than 100, to be awarded at the annual meeting in 1848.

Best,..$30. | Second best,..$20. | Third best,..$10.

The applicant for these premiums will be required to furnish the Society with the following information, viz:

1st. The kind and quantity of food and its value.

2d. The quantity and quality of wool—this to be determined by its being submitted to the stapling of some respectable manufacturing establishment, whose certificate shall accompany the application for the premium.

3d. The number of the increase.

4th. Kind of sheep and the number of ewes, wethers, and bucks.

5th. The value of sheep when fattened, and the value of lambs for the butcher.

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To Correspondents.—L. T. Talbot, A Subscriber, Nath. Sawyer (whose questions will be answered by a gentleman who has travelled in New Mexico, California, &c.), C. N. Bement, J. Bowers, Arch'd Jane, and T, are received. Two of the articles of the latter for Boys' Department came to hand so late as to be out of season, we shall therefore lay them over till next year. The other articles shall appear in our next. They are all good, and we are much obliged.

## REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, MARCH 23, 1846.

| | | | | |
|---|---|---|---|---|
| ASHES, Pots, | per 100 lbs. | $4 00 | to | $4 06 |
| Pearls, | do. | 4 38 | " | 4 44 |
| BALE ROPE, | lb. | 5 | " | 7 |
| BARK, Quercitron, | ton, | 25 00 | " | 26 00 |
| BEANS, White, | bush. | 1 12 | " | 1 25 |
| BEESWAX, Am. Yellow, | lb. | 28 | " | 33 |
| BOLT ROPE, | do. | 12 | " | 13 |
| BONES, ground, | bush. | 40 | " | 55 |
| BRISTLES, American, | lb. | 25 | " | 65 |
| BUTTER, Table, | do. | 16 | " | 25 |
| Shipping, | do. | 9 | " | 13 |
| CANDLES, Mould, Tallow, | do. | 9 | " | 11 |
| Sperm, | do. | 25 | " | 38 |
| Stearine, | do. | 20 | " | 25 |
| CHEESE, | do. | 5 | " | 10 |
| COAL, Anthracite, | 2000 lbs. | 5 50 | " | 6 50 |
| CORDAGE, American, | lb. | 11 | " | 12 |
| COTTON, | do. | 6 | " | 11 |
| COTTON BAGGING, Amer. hemp, | yard, | 13 | " | 14 |
| Kentucky, | do. | 12 | " | 13 |
| FEATHERS, | lb. | 26 | " | 34 |
| FLAX, American, | do. | 7 | " | 8 |
| FLOUR, Northern and Western, | bbl. | 5 50 | " | 5 87 |
| Fancy, | do. | 6 00 | " | 6 50 |
| Southern, | do. | 5 50 | " | 5 87 |
| Richmond City Mills, | do. | 6 50 | " | 6 75 |
| Rye, | do. | 3 75 | " | 4 00 |
| GRAIN—Wheat, Western, | bush. | 1 15 | " | 1 25 |
| Southern, | do. | 1 10 | " | 1 20 |
| Rye, | do. | 80 | " | 85 |
| Corn, Northern, | do. | 68 | " | 70 |
| Southern, | do. | 67 | " | 69 |
| Barley, | do. | 62 | " | 65 |
| Oats, Northern, | do. | 43 | " | 45 |
| Southern, | do. | 38 | " | 40 |
| GUANO | do. | 2 00 | " | 3 00 |
| HAY, in bales, | 100 lbs. | 80 | " | 90 |
| HEMP, Russia, clean, | do. | 210 00 | " | 210 00 |
| American, water-rotted, | ton, | 105 00 | " | 185 00 |
| American, dew-rotted, | do. | 75 00 | " | 125 00 |
| HIDES, Dry Southern, | do. | 8 | " | 10 |
| HOPS, | lb. | 20 | " | 35 |
| HORNS, | 100. | 1 00 | " | 7 00 |
| LEAD | lb. | 4 00 | " | 4 06 |
| Sheet and bar | do | 4½ | " | 5 |
| MEAL, Corn, | bbl. | 3 38 | " | 3 50 |
| Corn, | hhd. | 15 75 | " | 16 00 |
| MOLASSES, New Orleans, | gal. | 30 | " | 32 |
| MUSTARD, American, | lb. | 16 | " | 31 |
| NAVAL STORES—Tar, | bbl. | 2 00 | " | 2 25 |
| Pitch, | do | 1 25 | " | 1 38 |
| Rosin | do. | 75 | " | 85 |
| Turpentine, | do. | 4 00 | " | 4 50 |
| Spirits Turpentine, Southern, | gal. | 60 | " | 65 |
| OIL, Linseed, American, | do. | 64 | " | 65 |
| Castor, | do. | 57 | " | 68 |
| Lard, | do. | 70 | " | 75 |
| OIL CAKE, | 100 lbs. | 1 75 | " | 1 88 |
| PEAS, Field, | bush. | 1 50 | " | 2 00 |
| PLASTER OF PARIS, | ton. | 2 62 | " | 2 75 |
| Ground, in bbls., | of 300 lbs. | 1 12 | " | 1 25 |
| PROVISIONS—Beef, Mess, | bbl. | 7 00 | " | 9 00 |
| Prime, | do. | 4 50 | " | 5 50 |
| Smoked, | lb. | 6 | " | 9 |
| Rounds, in pickle, | do. | 4 | " | 6 |
| Pork, Mess, | bbl. | 10 50 | " | 13 00 |
| Prime, | do. | 9 00 | " | 10 00 |
| Lard, | lb. | 6½ | " | 7 |
| Bacon sides, Smoked, | do. | 3 | " | 4 |
| In pickle, | do. | 3 | " | 4 |
| Hams, Smoked, | do. | 6 | " | 10 |
| Pickled, | do. | 4 | " | 7 |
| Shoulders, Smoked, | do. | 5 | " | 6½ |
| Pickled, | do. | 4½ | " | 5 |
| RICE, | 100 lbs. | 3 75 | " | 4 50 |
| SALT, | sack, | 1 22 | " | 1 30 |
| Common, | bush. | 20 | " | 35 |
| SEEDS—Clover, | lb. | 9 | " | 13 |
| Timothy, | 7 bush. | 13 50 | " | 20 00 |
| Flax, clean | do. | 10 00 | " | 11 00 |
| rough, | do. | 9 00 | " | 10 00 |
| SODA, Ash, cont'g 80 per cent. soda, | lb. | 3 | " | 3 |
| Sulphate Soda, ground, | do. | 1 | " | — |
| SUGAR, New Orleans, | do. | 5 | " | 8 |
| SUMAC, American, | ton, | 35 00 | " | 37 50 |
| TALLOW, | lb. | 7 | " | 8 |
| TOBACCO | do. | 3 | " | 7 |
| WHISKEY, American, | gal. | 22 | " | 24 |
| WOOLS, Saxony, | lb. | 35 | " | 50 |
| Merino, | do. | 30 | " | 35 |
| Half blood, | do. | 25 | " | 30 |
| Common | do | 20 | " | 22 |

## NEW YORK CATTLE MARKET.—March 23.

At Market, 1000 Beef Cattle (800 Southern), 100 Cows and Calves, and 900 Sheep and Lambs.

PRICES.—Beef Cattle—Prices have fully recovered what little they had lost last week. We quote as in quality, $5a$7½ as the extremes of the market. Unsold, 100.

COWS AND CALVES.—Prices remain firm at last week's rates. All sold at from $15 to $35.

SHEEP AND LAMBS.—Holders were backward last week, and the offerings smaller than for some months past. All taken at prices ranging, according to quality, from $2 25a$5 to $6 50.

HAY.—The stock on hand at present is very small—fully adequate, however, to the demand. The North River being now open, fresh supplies, in the course of the week, are expected. Sales of Long Island at $1 per cwt.

## MOUNT HOPE BOTANIC GARDEN & NURSERIES,

ROCHESTER, NEW YORK,

*South St. Paul Street, nearly opposite the Cemetery.*

The Proprietors of this establishment offer for sale an unusually large and fine collection of Fruit and Ornamental Trees, Flowering Shrubs, Roses, Herbaceous Plants, Double Dahlias, Bulbous Roots, Grape Vines, Raspberries, Strawberries, Gooseberries, Asparagus Roots, Rhubarb, Hedge Plants, Green-house Plants, &c. &c.

The collection of Fruit Trees comprises the most popular varieties cultivated, and has been grown with the greatest possible care, to ensure accuracy. The proprietors are *practical, experienced nurserymen*, and devote their entire attention to the business. All the important operations are performed either by themselves or under their immediate inspection. Experience has fully proved that trees grown at this point, in addition to being free from diseases, are better adapted to cold climates than those of any other portion of the United States.

The collection of *Apples* includes several thousands of the famous new American apple, the *Northern Spy*. Of *Pears*, a large assortment of the choicest kinds are propagated on quince stocks, for garden culture, as *dwarfs or pyramids*, and will bear the first or second year after planting. A lot of extra size for immediate bearing are now offered.

The collection of *Ornamental Trees* is large, and includes a few hundred of the splendid *Paulownia Imperialis*. The catalogue of *Roses* embraces the most beautiful of the new varieties of the several classes; hardy and tender. A choice variety are propagated as standards or tree roses, 4 to 6 feet high, with fine heads. Of *Double Dahlias*, the assortment is unsurpassed, including the finest show flowers introduced to this country, and many that were imported last season at 5 guineas each. A separate catalogue will be published in April. The stock of Green-house plants is very extensive, and includes the most beautiful new Pelargonium (Geranium), Fuchsia, Camellia, Calceolaria, Verbena, Roses, Cactus, &c. All are finely grown, and are offered at greatly reduced prices.

Trees and plants packed in the best manner, and shipped to any part of the country agreeable to order. Priced catalogues sent *gratis*, to all *post-paid* applications. Orders from unknown correspondents must be accompanied with a remittance or a reference.

ELLWANGER & BARRY.

April, 1846.

## COUNTRY SEAT AND FARM.

FOR SALE.—A Farm and beautiful Country Seat, at Flushing, L.I., one mile from the steamboat landing—containing about sixty acres of land, under the best state of cultivation, having a fine view of the bay and surrounding country. On the premises are a two story dwelling-house (handsome interior), marble mantels and folding doors, containing ten rooms, large garret and cellar, with kitchen, washroom, and milkroom—attached, two large barns, carriage house, stable, and other outbuildings—also gardener's and farmer's cottages. The gardens are tastefully laid out with fruit and flowers, upwards of 100 peach trees, and over 250 specimens of fruit trees of various kinds, large green-house, hot-house, pots, &c., &c., and one of the most splendid vineries of its kind, in this country or in Europe, 186 feet long, and 22 feet wine, with span roof, containing 102 superior foreign Grape Vines, of 21 varieties, and 40 Peach, Nectarine, Apricot, and Greengage trees, on arched trellises in the centre, bearing large fruit. The vines commence bearing this summer. Further description is unnecessary, as persons disposed to purchase, will view the premises. The facilities of communication between Flushing and the city, both by steamboat and stages, are too familiar to need description.

For terms of sale, which will be reasonable and accommodating, apply (if by letter post-paid) to W. H. Franklin & Son, Broad Street, New York, or to the subscriber at Flushing.

JACOB R. VALK.

## GUANO.

The Subscribers offer for sale, on very accommodating terms, the balance of the ship Shakspeare's cargo, the only direct importation into this port from Ichaboe. Much guano from other parts of Africa has been sold as Ichaboe, which on trial has produced unfavorable results. To prevent the loss of ammonia, this cargo has been put in air-tight casks. Apply to

Feb. 6, 1846. E. K. COLLINS & CO., 56 South St.

## AGRICULTURAL INSTITUTE.

*Orange County Scientific and Practical Agricultural Institute.*

The design of this Institute is to afford the most efficient means for the acquisition of a combined scientific and practical knowledge of Agriculture.

A number of farmers residing in the same neighborhood, in the town of Montgomery, from 7 to 9 miles west of Newburgh, having united, under a written contract, one with the other, to become instructors to such pupils as may be committed to their care, through the undersigned, their officers, present the Institution to the attention of the public.

Each pupil will be under the practical instruction of the member of the association with whom he may reside.

The scientific instruction will be under the care of Mr. James Darrach, a graduate of Yale College, a gentleman of scientific attainments, and, in common with his associates, the holder of his own plow.

This part of the Institution will embrace most of the Academic Studies, Natural History, and principles of Agricultural Economy.

The peculiarity of this Institute which recommends it to parents is, that the practical instruction will be given by practical farmers, whose duty and interest compel them to attend to the economy as well as the general management of a farm.

It presents also the following features: Family Discipline and Care; constant companionship with the instructors; varied husbandry and soil, which the pupils will be constantly directed to observe and compare. In the neighborhood are places of worship within convenient distance for all to attend, Episcopalian, Presbyterian, Reformed Dutch, Scotch Presbyterian, and Methodist.

Terms—$125 per annum, for tuition and board, payable semi-annually in advance.

Mail and other stages that pass over the Newburgh and Cochecton turnpike, connect our places daily with Newburgh.

The Institute will open for the reception of pupils on the 1st of April.

Inquiries and applications may be addressed to either of the undersigned at Coldenham, Orange County, N.Y.

LINDLEY MURRAY FERRIS, President,
Samuel Wait, Jr., Secretary.

References—Frederick J. Betts, Esq., President of the Orange County Agricultural Society; John Caldwell, Esq., Salisbury, Orange County; A. B. Allen, Esq., Editor of the American Agriculturist; Wm. Partridge, merchant, New York; Peter H. Schenck, Esq., New York; Hon. Morris Franklin, New York; and the officers of the American Institute.

## JACKS AND JENNETS.

The Subscriber has two very large fine Spanish jacks, and some superior jennets for sale. Inquire, post-paid, of

New Brunswick, N.J. JOHN A. POOLE.

## FIELD AND GARDEN SEEDS.

The Subscriber has been so often requested to add Garden Seeds to his assortment of Field Seeds, that he has at length consented to do so, and now offers for sale a great variety, grown by responsible persons, and put up expressly for him. They are fresh, and he confidently thinks may be relied upon.

A. B. ALLEN, No. 187 Water Street, N.Y.

## PRINCE'S MANUAL OF ROSES.

PRICE 50 CENTS.

The new and improved edition of this work will be issued the present week. It comprises the most complete history of "THE ROSE," and of all the branches of this most interesting family that has ever appeared in Europe or America. Every variety that is comprised in any English, French, or American work on the subject, is described in this, together with an immense number of the splendid new varieties, that have not been noticed in any previous publication. The most ample information is also given as to the culture and propagation of all classes of "THE ROSE." Published by the author, Wm. R. Prince, Clark & Austin, Saxton & Miles, Wiley & Putnam, and Swords, Stanford & Co., New York.

*New York, March 1st*, 1846.

## IMPERIAL OATS.

A few barrels of these superior oats can be had of the subscriber. Price $4 per barrel, or 1.50 per bushel.

A. B. ALLEN, 187 Water Street, N.Y.

## DURHAM BULL FOR SALE.

Not having sufficient use for him, the subscriber offers for sale his thorough bred imported bull, Prince Albert. His sire was the celebrated bull, Sir Thomas Fairfax, and his pedigree can be seen in the British Herd book, Vol. 4, page 382. He is five years old, a red roan, of medium size, and of quiet temper. If not previously disposed of, he will be offered for sale at the next show of the New York State Agricultural Society.

Letters on the subject can be addressed to the subscriber at Red Hook, Dutchess County, New York, where the bull may be seen

ROBERT DONALDSON.